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DEMOCRATIC EQUALITY AND INDIVIDUALITY

DEMOCRACY[1] arose as a movement of political and social reform. It became formulated as a political doctrine. But it has always claimed support for its political tenets of equality and individual freedom in philosophical conceptions and religious faith. Sometimes democracy in this wider sense is called a faith and held in the name of religion. Sometimes it is called a philosophy and its justification is sought in rational thought. But in reality it is more than both and less than either. It rests upon a faith in reason itself, and in this it is one with all philosophy. But it is not a philosophy in the sense that it constitutes a system, or even that it can be derived from any one of the great philosophical systems. Historically it has claimed support in all the great opposing schools of philosophical thought. Realists and nominalists, rationalists and empiricists, intellectualists and mystics, Catholics and Protestants, Christians and freethinkers, have all professed democracy and made contributions to its theory. It is the legitimate offspring of Descartes and Locke, of Rousseau and Kant, and it has been sponsored by such opposed thinkers as J. S. Mill and T. H. Green, and in our own day by John Dewey and neo-Thomist writers.

Yet no one school in itself has provided an adequate conceptual basis for all that is essential to democracy. The truth is that democracy is rooted deep in the common soil which has nourished all these philosophic growths, and from which even the diverse species of

[1] Read before the Fullerton Club, January 13, 1945.

Eastern thought have found sustenance. To state this is, of course, to deny that democracy is merely a form of political theory, or that it denotes a particular form of political organization fitted to articulate the corporate life of particular cultures. It is to claim, on the contrary, that democratic thought expresses, however imperfectly, a universal truth implicit in all reflective thought; it is to claim indeed that the basis of all human association and of the individual achievement of men is and must be essentially democratic.

Aside from the basic faith in rationality which has characterized it, democratic thought has rested upon the two complementary concepts of equality and individuality. All democrats have agreed that in some fundamental sense all men are, or ought to be, equal, although they have differed as to how this equality is to be interpreted. And all democrats have also held that the individual as such has rights, and is, or ought to be, free, or has a unique value, however they have differed in their versions of 'rights' and 'freedom' and 'value'. Yet while the claims of both equality and individuality are essential to full democracy, its classical advocates have tended to emphasize one of these at the expense of the other, or to construe one in terms of the other. No philosophical thinker has, I venture to assert, succeeded in doing full justice to both or in effecting a genuine reconciliation of the claim to equality with that to unique and irreducible individuality. For these claims clearly conflict if we attempt to interpret and justify them in terms of our inherited philosophical tradition. Historically the doctrine that all men are equal has found its support in philosophical realism and rationalism; while individualism has sprung from nominalism and empiricism. Men should, it is argued, be equal before the manmade law of the state because they are already equal 'in the sight of God' or 'by nature'. Since all men share in a common rationality or humanity, or participate equally in the Divine nature, they are essentially equal, and their differences as individuals are mere accidents and so relatively unimportant. It is the nominalist tradition, on the other hand, which has supported the doctrine of 'individual rights', and the denial that a man is born as a member of any class. It is significant that modern democracy arose in England under the aegis of its nominalistic tradition. It is equally significant, however,

that from the start its advocates were constrained to appeal to realism to justify the doctrine of human equality.

Locke is especially instructive in this connection. As has often been pointed out, Locke was far from being a consistent thinker; his greatness does not lie in the beautiful architectonic of a great system, but rather in his matchless common sense, which led him to accept the truth of both sides of controversial issues even though he was unable to achieve a fundamental reconciliation. There is no very close connection between the theories developed in the later *Essay Concerning Human Understanding* and the political doctrines of the famous *Second Treatise on Civil Government,* although a strong strain of nominalism is evident in both. Locke is very careful to specify the equality he claims for all men. It is not, he says, "all sorts of equality", but only "equality in respect of jurisdiction or dominion one over another . . . being that equal right that every man hath to his natural freedom without being subjected to the will or authority of any other man" *(Treatise* c.vi*)*. If one inquires, however, on what grounds this claim to equality of jurisdiction is based, one finds Locke falling back on the realistic argument and stating: "there being nothing more evident than that creatures of the same species and rank, promiscuously born to all the same advantages of Nature, and the use of the same faculties, should also be equal one amongst another, without subordination or subjection" *(Treatise* c. ii*)*. This is, of course, clearly inconsistent with his arguments in the *Essay* against "real essence". He there asks concerning the species 'man': "Wherein, then, would I gladly know, consist the precise and immovable boundaries of that species? It is plain, if we examine, there is no such thing made by nature, and established by her amongst men" *(Essay* Bk III c. vi*)*.

But if nominalism can provide no support for the democratic doctrine of equality, realism is just as impotent to justify the individualism of democracy. Kant is one of the great spokesmen for the democratic and Christian belief in the dignity of the human person. He is in full agreement with Locke in condemning the subjection of one individual to another and in asserting his claim to freedom. Yet it is not as an individual that a man is free, or is worthy the respect

due the dignity of his person. It is in and through his rationality that he is free, and worthy of respect as legislator of the moral law to which he is also subject by his own consent. But this rationality he has in common with all men; it is the one universal reason which he shares, and it is as a universal, and not as an individual, self that he is lawgiver. Kant's is a great and noble version of democratic belief, but it is nevertheless a onesided and inadequate interpretation of the full significance of democracy.

Christianity has undoubtedly been an important historical source of democratic belief and practice. That all men are equal as the 'children of God' and all alike brothers to one another is a metaphorical expression of a truth accepted by all democrats. But it too fails to do justice to the democratic insistence upon the value and importance of the individual. This failure becomes clearer when the brotherhood of man is given a metaphysical basis by theologians. According to one school, all men are equal because they share in the Divine nature by a Platonic 'participation'; their individuality according to this version symbolizes their separation from the Divine nature. The fall of man and sin itself represent rebellion against God, and are conceived metaphysically as the separation of the individual will from the Divine will. The salvation of man can only be achieved by renouncing his mere individuality and merging his recalcitrant human will with that of God. Or again, theologians have urged that all men are equally sinners, since in Adam all sinned. If to this be added the doctrine that God has from the beginning separated the elect from the eternally damned, all support of the rights of the individual is swept away and every vestige of democracy is abandoned.

The individualism of democracy has not been merely a protest against or a denial of the realistic doctrine that a man's rights and duties are grounded in his membership in any class or natural species. It has been also been its claim that the status of the individual is independent of his membership in any organization or institution. As applied to religion this meant that salvation of the individual was dependent on his own private and personal relation to God and was not mediated through his membership in the church. Neither the church nor the state was divinely ordained, nor did either exercise any authority derived from God over the life and conduct of the

individual. The church, in the view of the Independents for example, was a voluntary association of individuals who chose to worship together because they cherished like private religious convictions. This conception of the church as based upon a compact freely entered into by independent individuals was applied as well to the concept of the state. However widely Locke's version of the 'state of nature' and of the 'social contract' differed from that of Hobbes, he shared the nominalist conception of the individual as independent of and in some sense prior to the state as a political organization. Despite the confusions and inadequacies of Locke's treatment, his doctrine of the natural rights of the individual expresses a cardinal principle of all democracy. It is precisely on this issue of the priority of the individual that democracy in our own day opposes totalitarianism and the whole organicist theory of society on which totalitarianism rests. The inconsistencies of Locke's position are primarily due to the fundamental difficulty of reconciling his nominalistic individualism with his acceptance of universally valid laws of Nature to which all men are equally subject. The problem he faced is basically the same problem that democracy has continued to pose to philosophic thought; the reconciliation of the conception of the individual as irreducible and underivable with the belief in the equality of all men as essentially members of a universal moral order.

This issue was, however, obscured by the fact that the conception of natural rights was hopelessly tied up with primitivistic notions of the 'state of nature'. Although it was irrelevant to the argument for natural rights to assume the historical existence of an antecedent state of nature in which men were either free or equal, neither Locke nor other thinkers of the time were clear on the matter. With the increase in historical knowledge and anthropological understanding of 'savages', it became easy to discredit the whole conception of the state of nature and along with it the doctrine of natural rights. Although Locke recognized that man is naturally a social creature, neither he nor other thinkers of the time were able to provide a psychological theory of man and of human relationships on which the democratic ideal of freedom and equality could reasonably be based.

It is not the purpose of this paper to trace the history of demo-

cratic theory, but only to consider by way of illustration certain important representatives of different schools. By far the most important and influential attempt to furnish a philosophical basis for democracy in the nineteenth century has been that made by English representatives of absolute idealism, most notably by T. H. Green. Inspired by the new version of realism expressed in the Hegelian concept of the concrete universal (and reviving Aristotelian modes of thought), T. H. Green has given a reinterpretation of all the basic ideas of democracy, at once more profound and closer to empirical realities. The state of nature, if taken as more than an abstraction, is brushed aside, and the social-contract theory similarly is dismissed as a mere fiction. The distinction is clearly made by this group of thinkers between the question of the historical origin of society and government and the question of its justification. No state of nature such as described either by Hobbes, Locke, or Rousseau, ever actually existed. Moreover, if it had, no social contract between individuals would have been possible, since it is only individuals already sharing and recognizing a common interest who are capable of entering into a contract. The contract theory is indeed a confused mode of expressing the truth that obligations have force only so far as they rest on the recognition of common interest, but it involves a contradiction so far as it assumes that individuals can have rights which are independent of their membership in a social community. Yet there is a sense in which individuals do have rights which are 'natural' and which do not derive their validity from any enactment of positive law. Locke was right, Green agrees, in holding that all human individuals as rational beings are subject to natural moral laws. What Locke failed to recognize is that it is only through membership in a community that a man can become a human individual, that is, a person. This is not simply because the presence of other human beings and his intercourse with them furnishes a favorable environment necessary to his development, as the presence of movable and manipulable objects provides an environment necessary to the development of the child's bodily powers. Nor is he a member of a community in the same sense in which an animal is a member of an animal group. We may think of the existence of the flock or herd as a means of

securing the ends of individual life, of averting danger and cooperating for food. And we may recognize that in some cases the animal may even die in defense of his group. But the human community differs in that there is a common good which is shared by each. This good is not like the prey which is hunted in common and shared in common as food, for what one eats another cannot. The common good of the human community is a moral good, and as such is shared without being distributed. It is indivisible. Yet it can be enjoyed only by individuals and only *as* the good of individuals who are persons. A man is a member of a human community, then, only in so far as he recognizes the common good as his own personal good. He can have rights only as a member of a community, but these rights are truly individual rights, since there can be no other rights than those of individuals. The community exists for individuals since it is only through persons that it can exist at all.

This idealist version of democracy thus offers an interpretation of the concepts of equality and individuality which at first sight promises a genuine reconciliation between them. Men are equal, not because as members of the same species they possess the same qualities and powers, but insofar as they share equally in an indivisible common good. They are not born equal, but neither are they born as men, but only with the capacity of becoming men. They achieve equality of status and of their natural rights through the same process of development by which they become men. Equality thus appears as the necessary condition of true individuality. Furthermore, since the common good is realized only through the recognition of it by each individual as at once his own personal good and the good of every other individual, all possibility of conflict is removed. The good of each individual coincides and is identical with the good of every other individual.

But this is no genuine reconciliation. The individual who is thus saved is not the true individual of democratic faith. Green has made a great advance in attempting to exhibit equality of status as a necessary condition for the development of the individual as a moral person. But he has not shown that these individuals are and must remain irreducibly different from one another, and that their

equality of status is the condition for the development of their individual differences. Now it is true that the concrete universal, from which Green draws much of his inspiration, is abstractly conceived as dependent upon the differences between the particulars which constitute it. It is a system of relations between members who are different in that each occupies a different place within the system. One might well question whether absolute idealism does justice to the metaphysical individual, but that is not the issue I wish to raise here. Even if one accepted the concrete universal as a metaphysical concept, he might well urge that, since the human being is real as an individual only through his membership in the universal system of the Absolute, his real individuality can be only partially realized in the finite community of human society. The real individual must remain more than a citizen of any state and his real being undetermined by his relations to other human beings. If, as a member of a community, he shares a common good, his own complete good cannot be confined within the limits of the incomplete and partial system of any human society. But this is not Green's own argument. He does, to be sure, recognize that the individual cannot fully realize his ideal self or attain his complete good in any particular human community, but that is because the communities that exist are not themselves ideal, nor the states 'true' states, but only imperfect versions of it. It is only of the ideal state that he can say, for example: "there can be no right to disobey the law of the state except in the interest of the state" (*Principles of Political Obligation*, II, Sect. 142). Or again: "There is no harm in saying that they [individual rights] belong to individuals as such, if we understand what we mean by 'individual', and if we mean by it a self-determining subject, conscious of itself as one among other such subjects, and of its relation to them as making it what it is; for then there is no opposition between the attachment of rights to the individual as such and their derivation from society. They attach to the individual, but only as a member of a society of free agents, as recognizing himself and recognized by others to be such a member" (II, Sect. 138). We may readily admit that individual rights can be realized only within a social community and through the relations individuals bear to one another as members, but

it is equally important to recognize that, if, as individuals, they were not more than such members, such rights would be meaningless. To say, as Green does, "now for the member of a state to say that his rights are derived from his social relations, and to say that they are derived from his position as a member of a state, are the same thing" (II, Sect. 141) is to identify the state with the community as "the society of societies", and is indeed to commit oneself to totalitarianism. The individual can have no rights against the state since his individuality is constituted by his citizenship. Even though it be denied that such a state actually exists, it is to accept the totalitarian state as the ideal or only 'true' state. But surely the ideal state, or community of men, is not to be identified with the universal system of the Absolute, within which alone the full being of the individual can be determined.

There is a further implication of Green's theory which is important for our argument. As the only 'true' state is the ideal, or completely developed state, so the only true individual is the completely developed individual. It is only through membership in the ideal state that men achieve true individuality. Men as they actually exist are only potentially such members and hence have only potential individuality. Green does not clearly draw this conclusion. He wavers between the view that it is through his *capacity* for self-realization in an ideal state that a man has rights, and the view that his rights attach to him only so far as he has already attained true individuality in realizing such membership. In the latter case his rights would be equally potential with his individuality. Now there is a very important distinction between holding that all individuals, as individuals, are potential—that potentiality is a constant factor in individuality as such—and holding that true individuality is to be identified with actuality. To hold the latter would be to hold that the only true individual is the one completely actual being, God himself. The plurality of ideal individuals, who through mutual recognition of one another constitute the true community, are indeed merely finite, but they are all so many finite versions of the Absolute. They do not differ from one another positively, but only negatively and through limitation. The good which each attains in realizing himself is the same good attainable by every

other. As rational, all men think alike; as moral, they all recognize the same ideal of self-realization; and as the reason they share is the same universal reason, so the self they would realize is the same universal self.

Such a philosophy cannot support the individualism of democracy. The individuals whose claim to equal rights democracy asserts are individuals whose differences from one another are positive and irreducible. They do share a common good; yet the good of each remains distinct, since it is the good of a unique individual. My good differs from yours; and, while it may include yours, it may in part exclude and conflict with yours as individual. We may postulate an ideal in which the good of each includes and is included by the good of every other, but even if such an ideal were theoretically realizable, it would not be the ideal of democracy. Democracy is indeed an ideal, but it is an ideal for men, who as men are not only imperfect and incomplete, but indeterminate. Neither human societies nor human individuals are in process of development toward a fixed goal of perfection. Since they are indeterminate, their ideal good is yet to be determined. As moral beings men not only suffer from inner conflict and unrealized ideals, but are continually constrained to modify the ideals they hold as they themselves change with experience. It is the function of reason not merely to exhibit means to ends set by our desires, or even merely to formulate and make explicit what is already implicit, but to participate in the determination of our own ends. In being rational, men do share a common world and acknowledge that there is a truth the same for all. But this does not mean that they agree as to what is true, nor would their agreement itself be evidence of their rationality. Human rationality shows itself as much in the disagreements between men as in their agreements. The errors into which they fall and the follies they commit are possible only through their very rationality. Reason can function only in a being who can and must learn from experience. Democracy is an ideal in that it represents a form of association in which disagreements and conflicts are tolerated. It pretends to provide no resolution of conflicts and no reconciliation of differences, but only a

condition within which, and a method by which, each successive conflict may be resolved and each breach healed.

A philosophy that can provide an adequate basis for democratic theory must satisfy certain conditions. It must admit the reality of the temporal and changing and conceive the real as including potentiality and indetermination. It must account for individuals whose reality is not conceived as constituted by their membership in the eternally complete system of the Absolute, but as exhibited in their capacity for becoming members of many systems without being exhausted in any. But while democracy must find a basis in philosophical conceptions, it must equally depend upon an empirical theory of human beings and their social relationships. It is, however, an ideal. Its classic appeal to a 'law of nature' is an appeal to what ought to be rather than to what is. The thinker who would defend democracy must himself make valuations and acknowledge the universal validity of moral standards. In asserting that men have natural rights, or that all men are equal in their rights, he is accepting standards as universally valid, and that these are standards which all men ought to recognize. But he is also implying something about the nature of man, or about men as natural beings. He is implying, first, that men are by nature moral beings, who make moral judgments and recognize ideals, and, secondly, that the standards which as men they ought to accept are those which in some measure and to some degree they do actually accept. In his attempt to justify democracy, the advocate must seek to show that it is genuinely natural to man, not merely as an abstractly rational and moral being, but as a creature essentially social. If all men ought to be treated as equal, it must be because equality in some sense is natural to them as a necessary condition of human association. If as individuals they ought to be free or have specific rights, it is because the enjoyment of freedom and of such rights is a necessary condition for the development of their individuality as human beings. The problem with which we have been especially concerned, the reconciliation of the doctrine of equality with individualism, can only be solved by showing that equality of status is a necessary condition for the development of

the human individual, and that, as a matter of fact, all distinctively human association is actually based on a fundamental equality of status. This was indeed what Green attempted to show, but he failed in that the framework of his thought did not provide for the ultimacy of the individual as unique, and also because the abstract idealism of his treatment was inadequate to the empirical reality.

Democracy must find its empirical justification in the nature of man as a social being. Man is social, first, in the sense that he is constrained by a sort of natural necessity to live in cooperating groups in order to preserve his life and provide for his basic needs of food and physical security. Secondly, he is social in the deeper sense that membership in a group is a necessary condition of his developing all his distinctively human traits. The culture of the group provides an environment as essential to the development of his mature humanity as is the marsupial pouch to the maturation of the kangaroo. Nor does his distinctive humanity as a social being show itself only in the exercise of his higher powers. He is equally human in the way he eats and fights and makes love. He can satisfy his basic biological needs only in culturally determined modes. He is social through and through. It is natural to him to be thus culturally determined in that such determination is a necessary condition of living a human life. If we are to find any legitimate meaning in the classical ideas of 'natural' equality and 'natural' rights, it must lie in universal conditions of human association. There is indeed a 'state of nature' in which all men are equal and individuals have rights, but this does not lie in a mythical past but in what is common to human society everywhere, in the universal nature of culture itself.

At first sight such a statement seems absurd. For what is peculiar to human society as compared with that of animals is that it has no fixed form. Men are indeed social animals who depend on one another for the satisfaction of their needs and even for life itself, but there is no one form of association that is natural to them. The patterns of culture are many and diverse. The patterns we find are all historically determined, products of convention rather than nature, contingent and fortuitous rather than necessary. They range from types of organization stressing democratic equality of status to those

based on a hierarchy of castes or even maintaining themselves with an extreme form of dominance-subjection, slavery itself. To assert that a basic equality of status is a necessary condition of effective human association would seem to fly in the face of all the empirical evidence furnished by history and anthropology.

However diverse cultures may be, they are nevertheless all species of a common genus. They all share certain common traits which identify them as cultures. Nor are such traits far to seek. In the first place, every culture is characterized by its possession of conventional standards. It has customary and established forms of human relationship, of kinship or class or professional role. There are standardized and approved ways of carrying on every activity. In the second place, every culture, since it is conventional, must be carried by tradition; it must be learned by each individual through his own efforts. And finally, every culture is transmitted and maintained through linguistic intercourse. It is not merely that language is a universal trait exhibited by all cultures, but that the coordinated activities of the members of a human community can be maintained and controlled only through the medium of linguistic intercourse.

There are other more specific traits which characterize culture everywhere, but the three cited are fundamental and sufficient for our purpose.

It follows from the conventional character of culture that, although it depends on a division of labor and a specialization, sometimes to a high degree, of the functions performed by individual members of the group, a human being is not biologically determined to any specific social role (except indirectly and to a limited degree by sex). It is true that there are individual differences which may make one individual a better mechanic or priest or politician than another, but he is not born to be any one of these any more than he is born to be a king. He must learn to play his part, and he is capable of learning to play not one but many possible roles. Now it is evident that division of labor and specialization of function in human society are effective in proportion as they rest upon a basic equality of status with respect to the cultural inheritance. The democratic demand for equality of opportunity is a recognition of this. For the demand is

justifiable not merely as a matter of abstract justice, but also as a means for assuring effective cooperation for mutual benefit, since equality of opportunity provides the condition for the discovery and development of natural differences, and hence for their utilization for the common good. The doctrine of natural equality is, however, rooted still deeper in the condition of human association.

The culture of the group forms a common inheritance for its members. It is there for them all alike. It is only so far as he enters upon this inheritance that the child becomes a man, and he enters upon it only by learning it through his own individual efforts. The more fully he masters it and makes it his own, the more scope he will have for the exercise of his individual abilities. Acquiring a culture is by no means learning an individual skill, however specialized a role the child may be constrained to learn. It is acquiring what is essentially common to himself and others. Nor can it be learned by himself alone; others must cooperate with him; he can learn it only so far as others continue to learn it too. Culture can be transmitted and perpetuated only through a democracy of learning.

Green was right in urging that human association involves a common good which must in some measure be recognized by each. Yet this is to conceive the matter too narrowly. Those who share a culture must not merely recognize a community of interest; they must acknowledge a common standard of values, and share a common *world* in which the standards may be applied, and within which there may be conflict of individual interests despite the common good. We may find an analogy in the playing of an organized game, such as baseball or hockey. It is a necessary condition of the game that there be a common end, a good shared by both the members of the opposing teams and the spectators: the enjoyment of the sport. But there is also in the case of the game an essential conflict between the ends for which the teams play, victory, since one must win at the expense of the other. What is common to all participants in the game, and what must be at once shared and possessed in its entirety by each, is the understanding of the rules of the game and the acceptance of the standards involved in playing it. Each player, moreover, must learn not only to play the particular role assigned him, but he must also

learn the particular roles of every other player, in the sense that he must imaginatively grasp and so anticipate the impending plays of each opponent and teammate. The better he keeps the changing course of the game in mind by a sort of sympathetic imagination, the better he can play his own part and the fuller scope he has for the exercise of his own individual talents.

To acquire a culture is very much like learning to play a game. During the early weeks and months of his life it is largely by a process of habituation that the child's attitudes and behavior become molded in conformity to custom. But while his cultural education is begun by habituation it cannot be completed by such means. It is not enough for him, for example, to learn to recognize his own mother or father or older sister, and to discriminate the persons of his own household by appropriate behavior; as he mingles with other children and members of other households, he must learn to treat them not simply in terms of their relationship to himself, but also in terms of their relationship to one another. Similarly he discovers that objects and acts free to him in his own home or on one occasion are forbidden elsewhere and on other occasions. As the player must learn the rules of the game and adopt its standards, so the child must learn the intricate pattern of relations—of kinship and class, of authority and property, of objects and usages—before he can play his role in the community. And to do this he must, like the player of a game, learn the roles of others in order to play his own. In a profound sense, therefore, all individuals have an equal status with reference to their culture. This culture is not itself a common good, but a common condition of life which they share, and which they must share equally if it is to be realized at all. Any culture is an organized whole, a system, which is not divisible into independent parts which can be acquired piecemeal. This does not mean that it may not be acquired gradually and more or less fully. But it cannot be monopolized by any individual or class. While one individual may absorb and master his cultural heritage more fully than another, there are limits beyond which this is not possible. As one cannot become a good baseball-player if he plays only with poor teammates or inferior opponents, so one can participate in and use his culture

only so far as others do so reciprocally. There is thus a certain fundamental democracy which is natural in that it constitutes a necessary condition of culture as the universal form of human association.

Here we must face certain difficulties. If our argument is sound, does it not prove too much? If all cultures must rest upon a democratic foundation, how is it possible that there should be such a wide diversity in the patterns of culture? How, in particular, is a caste system, or a social organization based on slavery, possible? Are we not, in fact, committed to the absurd conclusion that slavery itself is possible only so far as it rests on democratic foundations? Let us consider the case of slavery.

Slavery is the very antithesis of democracy; it represents a denial of human equality and of individual freedom and rationality. The slave is, as Aristotle defined it, a "living instrument". He is one who is used merely as a means for the ends of another and not as an end in himself. Now it could be shown, I am confident, that as a matter of historical fact a pure case of slavery as an institution has never existed, or at least been able to maintain itself. Institutionalized slavery has always been a limited slavery; where it has maintained itself, the slave in return for his services and his obedience has received compensations and been accorded certain rights. Even where the master has had the power of life and death over the slave, not only was a useful slave rarely killed, but there have existed many potential advantages which have tended to reconcile him to his servile status. Even the Nazis are constrained to make promises as well as threats. As Aristotle pointed out in defending slavery, it is only the "willing" slave who is efficient. It is instructive to read the arguments advanced in defense of our own 'peculiar institution' in the South. Like Aristotle, the American defenders of slavery held that some men, the negro race, are born to be slaves. Not only are they incapable of living on terms of equality with the whites, but slavery is a positive boon to them, in that it provides the only condition under which they can attain such good as they are capable of realizing. The 'peculiar institution' they were defending, and which they insisted was the one actually in operation in spite of minor abuses, was by no means

pure slavery. On the contrary it was conceived by its defenders as an institution justified and actually maintained through mutual benefit, as greatly to the advantage of the slave as to the master.

A little reflection shows, indeed, that there is something paradoxical in the notion of pure slavery; slavery is essentially selfdefeating. Any living instrument, like an inanimate tool or machine, must be kept in good condition if it is to be efficient. The domestic animal must be kept in good health and its essential needs supplied; even the animal in the zoo, kept purely as a means of human education and entertainment, can serve man's purpose only so far as the zoo provides natural opportunities for the exercise of its powers and the satisfaction of its wants. And similarly a human being can be an efficient instrument to other men only so far as he is treated as an end in himself. Now human slaves have sometimes been used as beasts of burden or to do work a domestic animal might do as well, but generally speaking men have been kept in slavery because they can perform services of which no animal is capable. Slave labor has, to be sure, sometimes been rendered unprofitable economically by the invention of machines, but this is true of the 'free' labor of the industrial worker as well. To use a human being as an instrument involves using him *as* a human being, utilizing his distinctively human powers, his intelligence and his capacity for willing obedience. The slave must consent to his servile status and acknowledge the authority of his master, if only through personal attachment and devotion. A willingness to obey his master is not, however, enough. The slave must be able to understand the commands of his master.

Master and slave must speak a common language. If the master were to confine his orders to such simple words of command as he might use to an animal, and the work of the slave were correspondingly limited to the blind performance of particular acts in response to equally particular commands, there would be little value in human slavery. The intelligence of a slave may be relatively low, but it is human intelligence; and it is humanly intelligent obedience that the master must elicit. His commands must therefore be meaningful, and not mere compulsive stimuli. He must be able to explain as well as command; he must, as Aristotle urges, converse with his slaves and

not command only. The slave in return must be able to ask questions, to make reports, and even to offer objections.

And here we have the crux of the matter. For the attitude of obedience and the capacity for obedience to commands are possible only so far as master and slave already share a common world within which they communicate. Whatever tends to exclude the slave from the world of the master, and to confine him within a world of his own, constitutes a limit to his understanding of the commands of the master. Communication through language is possible only between inhabitants of the same world and members of the same community. The paradox of human slavery lies in the fact that it at once depends upon communication and sets up a barrier to communication.

The possession of language, as we pointed out, is a universal trait of culture. Not only does every culture include a language, but it is transmitted and activated through the use of language. Linguistic communication is essential to the maintenance of human association. Language is essentially democratic. It is no respecter of persons. Before it, as in the sight of God, all men are equal. Furthermore it can be used only by those who recognize their equality of status. There is an essential reciprocity between speaker and hearer. This may be formally expressed in grammatical structure, as in personal pronouns and verbal forms, but, whether it is formally expressed or not, there must be reciprocity in the use of linguistic forms. I must distinguish myself as alternately 'I' or 'You' or 'She': and you to whom I speak, and him, of whom I speak, as reciprocally 'I' or 'Him' or 'You'. Each user of language must, in the phrase of G. H. Mead, play the role both of the 'particular other' and of the 'universal other'.

But if it is only as equals that men can communicate through language, it is only because they are differing individuals with different experiences that they have anything to communicate. Communication is possible only between dwellers in a common world, but it would be unnecessary if men did not live in different localities of this world and have private possessions within it. It is because individuals carry on different economic enterprises and produce different goods that they need a public market and a common system of transportation. And, as a system for the exchange of economic goods at once depends

upon and fosters differential and specialized production, so a language is the means at once of communicating the ideas and feelings of different men and of enlarging and enriching the private experience of each. To master the universal means of communication is to possess the means of inner creativity.

It is in these facts that we find both the natural basis of democracy and the justification of it as the ideal form of human association. All cultures depend for their continuity and their functioning upon the use of language. The cultural tradition is transmitted from one generation to the next through myth and folklore, story and admonition, history and literature. It lives and functions through free conversation between individuals and the organized communication of groups. Every culture rests continuously upon the essential democracy of language. Nevertheless many, perhaps most, cultures maintain themselves successfully through institutions and practices which are the reverse of democratic. Each culture provides established procedures for the distribution of the common goods of life and for allotting to its members their distinctive social roles. Its patterning divides its members into groupings, more or less complex and overlapping in greater or less degree. An individual normally belongs to more than one group and plays more than a single role. In some types of culture membership in one basic group is a condition of membership in other subsidiary groups; the overlapping is concentric and fixed. Membership in such a basic group, class, or caste, is usually fixed at birth. But, whatever its type of pattern, a culture must be maintained through the use of language. This means that each pattern of culture carries with it some corresponding organization of linguistic communication. No society, even the simplest and smallest, is carried on only by an unregulated conversational give and take. Agencies and occasions are established by custom for the perpetuation of tradition, and channels are kept open through which communication may flow from group to group. In a highly centralized society the official channels run from center to periphery; the despot issues his orders and promulgates his decrees to his subjects, but there is no comparable avenue of response open to the people. The returning current must flow underground. Haroun-Al-Raschid mingles with his subjects in

disguise and converses with them man to man; less wise despots may depend on backstairs gossip. But the murmurs of the people as well as their plaudits must reach the ruler's ears, if his rule is to remain secure, for communication must flow both ways.

In a society segmented in hereditary classes, or castes, communication remains free between members of the same class, between acknowledged equals, while class-distinctions act as dams to free intercourse. The Cabots and Lodges speak only to one another. Nevertheless, since classes, like the segments of an organism, can maintain themselves only by a reciprocity of function and an interchange of goods and services, some means of communication between them must be provided. The more fixed and rigid the classes, the more formal and limited is the intercourse. Communication tends to become canalized and to flow only through a system of locks on approved occasions. Any cultural pattern based on fixed relations of dominance-subjection involves a systematic damming of free communication and the confining of it within limits fixed by convention. That systems of this sort, once their balance is established, may maintain themselves through long periods we know from the evidence of history. Their rigidity of structure is, nevertheless, a source of weakness, since they must *resist* change in order to endure. An ideal society must be one which, unlike Plato's republic, can not merely endure in a changing world but continue to grow and live through inner change. It is only so far as the natural democracy which forms the root of all culture finds development through democratic institutions that a society enjoys this plastic vitality. To secure this, a state organized in the form of political democracy is essential. Political democracy and cultural democracy are mutually dependent. No form of government can be merely imposed; it must in some degree be actively supported as well as passively tolerated by the governed. On the one hand, political democracy must find continuous support in the democratic attitudes and sentiments of the citizens, and it must function through democratic customs and institutions, social and economic. On the other hand, a democratic form of government provides the framework of law and the authoritative control without which cultural democracy is not secure.

Democracy, then, is an ideal, not because it secures the good to men, but because it maintains the conditions under which they can continue not only to seek the good they already envisage, but to determine an as yet indeterminate good. Democracy is an ideal for human beings because it is the only form of society which at once depends upon and provides for the organization of free communication. It demands equality, because it is only as equals that men can communicate; it values the individual, because it is only the individual in his difference from others who has anything to communicate to them, and because it is only the freely communicating individual who is fully rational and the source of creativity. John Dewey has said that shared experience is the greatest of human goods. Like all moral goods, it is at once an end in itself and a necessary condition for the realization of all other goods.

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THE QUEST FOR CERTAINTY

1. *CERTAINTY OF CONVICTION:* Philosophy is a quest for certainty. It seeks ultimate truths and realities which cannot possibly be rejected and enjoys them with a confidence nothing can weaken. It strives for "a perpetual feast of nectar'd sweets where no crude surfeit reigns".

We can attain a certainty of conviction without philosophy. Indeed we can obtain such certainty more readily without than with it. To reach a state of complete confidence one need do little more than protect a belief from the threat of criticism by eliciting the support of tradition or of gross observation. Beliefs which reflect the bias of gross observation or the dogmas of tradition are, as a rule, not subjected to criticism and stand out as unimpeachable certainties. Most men were once perfectly confident that the world was stationary because they refused to question the testimony of their senses. And most educated men are so wrapped up in the tradition of nineteenth-century science that they take determinism as an absolute truth. They have a subjective certainty obtained by uncritically holding to a traditional belief.

Subjective though the certainty of conviction is, in the sense that it is privately enjoyed and capable of being generated by a failure to examine, it can be objective in the sense that it can be grounded in and justified by a knowledge of what is necessarily true. The certainty of conviction that philosophy seeks is a certainty which follows from a grasp of what is actually certain.

Just what is actually certain is a difficult matter to decide. It is so difficult that some of the most penetrating intellects have urged what

was actually doubtful or false as truths beyond the possibility of denial. Aristotle was convinced that he had shown there could be no atoms; Kant thought that he had proved it was always wrong to take what belonged to another, though the theft was slight and though a life was at stake. The list is long and tedious, a testimony to the fact that philosophy is an arduous and even treacherous pursuit.

Not all actual certainties are the concern of the philosopher. It is certain that Jones is Jones, that I am now in pain, that two and two are four. Undeniable though all these are, and useful though some of them have proved to be, they are not significant enough to be termed philosophical. What philosophy seeks are actual certainties which are basic to all others. Those certainties lie beyond and are more universal and ultimate than those that might concern other inquiries. Philosophy is the quest for certainty in the sense of being the quest *par excellence,* not in the sense of being the only possible, actual, or valuable quest for an unshakeable conviction and undeniable facts.

The pursuit of philosophy is difficult and tortuous. It demands the persistent and highly critical use of powers of generalization, analysis, reasoning, reconstruction, and speculation. These activities are sustained and infected by an awareness of the value of the goal to be thereby attained. To that extent, despite the effort and punishment which the pursuit exacts, philosophy is enjoyable in itself. It ends with a knowledge of what is ultimate, objective, inescapable, and permanent, felt within as having the strength and meaning they actually have. The enjoyment which is the fruit of philosophic knowledge is the enjoyment of oneself as one with what is eternal and true.

2. *EXISTENTIAL CERTAINTIES:* The philosophic quest would be doomed to disappointment (1) if there were no certainties, or (2) if there were such certainties but they were not available to man, or (3) if they were available but were of no or little value.

The denial that there are actual certainties has a strong and a weak form. The strong form asserts that it is impossible that there should be any such certainties. But the more surely that contention makes

its point, the more surely does it make the opposite one as well. To say that it is impossible that there should be certainties is but a negative way of asserting that it is certain that no truth is certain.

The strong denial of the contention that there are actual certainties turns out to be a way of supporting that contention. If we want to maintain that there are no certainties, we must admit that the strong denial is mistaken and that it is possible that there should be some certainties, going on, however, to contend that there do not happen to be any in fact. But this weak denial cannot be maintained unless we (a) engage in and partly attain the goal of a philosophic quest for certainty, (b) stop our inquiries arbitrarily, and (c) dogmatically assert what, as a matter of fact, is false.

(a) Unless we first search for that which is certain we will not be able to discover whether or not it exists. If one does not look to see, one cannot rightly contend that he knows what is not there to be seen. But to know whether or not there are certainties of the required kind, the whole content of all realms of being must first be surveyed. Since it is beyond the power of man to examine each and every item in the universe—it is even beyond his power to make a detailed examination of every item of daily experience—he must make use of a general method which will enable him to deal, with certainty, with the totality of things. To make use of such a method, however, is to engage in a philosophic inquiry. It is philosophy which takes all of being as its province, making use of a method of investigation which permits of the necessary characterization of every fact. To be able to say, therefore, that there are no certainties, we must first look for them, and look for them by means of a method which enables us to affirm that all facts must be grouped in one way rather than in another, and that no one of the items in these groups is a certainty of the required kind.

(b) He who seeks for certainties, no matter how diligently, may not find any. But this would not prove that there were no certainties awaiting discovery. There are many ways of making a general survey, many methods by which the whole of being could be examined and even characterized accurately. Should one method fail to reveal the presence of any certainties, a further use of it may be required, or still another method ought to be employed. The contention that there are no

certainties achieves plausibility only because we arbitrarily suppose that the methods which have so far failed to yield them have been put to their fullest use and are the only methods that are to be used. The best philosophic method is that which makes possible the discovery of the greatest number of certainties; and it is one of the tasks of philosophy to discover it. It is only when we know that we have a method which is designed to ferret out certainties in a way no other can, when we make use of it to the full and yet fail to get results, that we can begin to make reasonable the claim that there are no certainties to be found. But then at the very same time we must affirm that the method and its results are absolutely certain.

(c) As a matter of fact, there are many certainties with which we are acquainted. Logic is overrun with them. Whether or not there are others is a question for further investigation, not something to be answered arbitrarily or in advance. If it is our intent to deny that there are certainties we must qualify our weak denial and make it read, not that there are no certainties, but that there are no certainties of a particular kind—say, those about values, knowledge, being, and so on. Such a denial has often been urged. It is to be noted, however, that it depends on the supposition that we already know some certainties and that these exclude the presence of others. It depends, in short, on the supposition that we have not only engaged in but have at least partly succeeded in the pursuit of philosophy. Even the most qualified denial of the contention that there are actual certainties is highly dogmatic, or is a late product of a successful, complete search for certainty.

The denial that there are actual certainties, so far as it is not self-refuting or obviously false, is a limited and derivative assertion that there are certainties and that the few we know are all there are.

3. *UNKNOWN CERTAINTIES.* The second of our doubts was to the effect that though there were certainties other than those we now know, they were forever beyond the reach of knowledge. The only certainties we can know, it may be contended, are logical certainties and the certainty that knowledge points to nothing certain in fact. This is the position of most moderns.

One can assume this position only if one has infallible knowledge.

The view that all knowledge is fallible, that it is confined to the here and now, that we can know only what can be gleaned through the use of the scientific method, or any other view which attempts to decide what we can and what we cannot possibly know, must, to make its point, rest on a prior discovery of what knowledge and knowing must necessarily be. To show that knowledge has normally taken only probable or transient truths as its object, that only non-philosophic assertions have been widely accepted as reliable, that these alone are useful, communicable, or uncontroverted, is obviously to show nothing about what will be true in the future or what ought to have been true in the past, and nothing about the promise of some other mode of knowledge, not yet exploited.

In short, we either know or only hope, guess, fear, or suspect, that the question, whether or not there are certainties still to be known, is beyond our power to answer. If we know that it is beyond our power, then we know something that is certain about the nature of ourselves or knowledge. If we do not know whether or not it is beyond our power, we have no right to say that it is beyond, and ought in fact to try, as philosophers, to see whether or not it is. But to try to see whether or not certain types of certainties are beyond our power to know is nothing other than to make a philosophic attempt to search for certainties. Accordingly, anything less than the thesis that knowledge is necessarily unable to cope with philosophic certainties ought to prove a stimulus for engaging in the philosophic enterprise, and not serve as a warrant for neglecting philosophic problems.

A justified claim that we cannot know whether or not there are certainties for us to know must be grounded in an adequate and undeniable understanding of the nature of knowledge. But we cannot know what the character of knowledge must be unless, in addition to knowing certainties about knowledge, we are in possession of undeniable truths regarding (a) what is, (b) what might be, and (c) what ought to be, and thus only if we already know certainties in each domain of philosophy, in ontology, logic, aesthetics, ethics and the theory of knowledge.

(a) A theory of knowledge does not attempt to formulate an

account of what a fictitious being, or a being living in some other kind of universe than ours, might know. It is a theory which attempts to make evident what knowledge is and must be for real men living in this universe.

To frame a theory regarding the powers and limits of real men in a real universe something must be known about those men and that universe. But if all the knowledge we have of them is questionable or tentative, we cannot assert with surety anything about their capacity to know or not to know. To be able to determine the character and limits of our knowledge, we must have a sure knowledge of man and the universe he inhabits. But if we have some sure knowledge of man and the universe we have a grasp of some ontological certainties. A theory of knowledge, accordingly, which claims to determine the limits and promise of inquiry, which tries to decide whether or not there are certainties within our power to know, must, if it is not to defeat itself, admit that there are ontological certainties already known. (The converse, to be sure, is also true. We need a theory of knowledge to help us determine which ontological assertions are or could be true, as surely as we need a grasp of ontological truth to determine whether or not a given theory of knowledge is pertinent to what in fact exists. The pursuit of ontology presupposes the possession of some epistemological truth; the pursuit of epistemology presupposes the possession of some ontological truth.)

(b) It is one of the functions of a theory of knowledge to provide criteria by which we can distinguish the intelligible from the unintelligible, the necessary from the gratuitous. It is logic, however, which states the minimum and inescapable conditions to which everything intelligible or necessary must conform. A theory of knowledge must rest on a knowledge and use of the truths of logic to avoid defining as necessary or intelligible what is actually dubious or selfcontradictory, and conversely. But then it obviously cannot, without defeating itself, assert that all logical certainties are beyond the reach of man.

A theory of knowledge presupposes an acquaintance with some logical truths. The converse is also true. To be sure that we know and not merely hope we know that we are confronted with logical truths, we must be in possession of unquestionable criteria which

enable us to distinguish what is from what we merely suppose to be the case, and what is formally necessary from what is concretely necessary. (For similar reasons, we must affirm that ontology and logic presuppose one another. We must have a sure knowledge and must make accurate use of the canons of logic if we are to be sure that our ontological truths are consistent and necessary. On the other hand, we must make accurate use of a sure knowledge of the way in which what might be is related to what is, if we are to know whether or not we are dealing with logic as the science of what is really necessary and intelligible.)

(c) A theory of knowledge has an objective. That objective is an ideal for it, something which it supposes ought to be. If a theory of knowledge is to determine whether or not it is moving in the required direction, and when and whether it has attained its end, it must know the essential features of that ideal. It must know too the ways in which its ideal differs from other ideals and must know by what means it is to be reached. A theory of value characterizes and distinguishes ideals with certainty and provides inescapable evaluations of the means designed to attain them. A theory of knowledge which knows what it seeks and refuses to be deflected from its course therefore presupposes an acquaintance with and use of certainties in the field of value. For similar reasons, we must acknowledge that logic and ontology also presuppose a similar grasp and use of certainties in the field of value. They, like a theory of knowledge, are inquiries concerned with the attainment of ends and requiring for their development a knowledge of ideals and the means for attaining them.

The converse is also true. We can be sure of what ought to be only if we know the difference between fact and fancy. But this requires the use of the criteria which a theory of knowledge provides. (A theory of value also makes use of logical canons, and concerns itself with the goods of actual beings; it presupposes the knowledge and use of certainties in logic and ontology as surely as they presuppose certainties in the field of value.)

A theory of knowledge must admit that there are certainties which are not only knowable but already known in the fields of logic,

ontology, and value. One might go on to maintain, of course, that apart from these certainties no others could be known. But to make this last point, it would be necessary to show that the nature of any possible unknown certainty is such that it violates the very meaning of knowledge. Such a demonstration cannot be provided. To know that unknown necessities are unknowable, we would have to know something about the nature of those necessities and must, therefore, to that degree, grant that they are knowable. To prove that the unknown is unknowable, we must know something about it, thereby getting in the way of our own intent. It is impossible to maintain that there are certainties which we cannot possibly know.

4. *THE VALUE OF CERTAINTIES:* Whatever certainties we might discover, however, our third doubt reminds us, might be valueless. From what we know of logic it would seem that (a) certainties convey no knowledge, that they are trivial, tautological. From what we know of the history of philosophy it would seem (b) that the contentions of philosophy form an inconsistent set, embroiling one in hopeless paradox and confusion, so that the only value philosophical certainties have is to make it certain that one will end in bewilderment.

(a) "Whatever is necessary" it might be contended, "is necessary solely because it embodies a logical truth. 'Jones is Jones', 'Smith is Smith', 'Pigs are Pigs', are different assertions. But all of them illustrate the same logical truth, 'x is x', and it is for that reason that they all are and must be necessarily true. Similarly, 'cats are not dogs', 'I am not you', 'nothing is at once round and square', are necessarily true because of the logical truth, 'x is not non-x', which they embody, and not because it is animals or men or shapes with which they deal. The content of a necessary truth is irrelevant to it; it is true solely by virtue of the logical law which it contains. But logical laws are true by virtue of their structures alone. They are ways of expressing the fact that any predicates or consequents necessarily belong with only those subjects or antecedents which already contain those predicates or consequents. Thus not only are logical truths empty of content but there is no information which they could convey, since all that

they enable one to do is to repeat in the end what had been affirmed in the beginning. What is necessarily true is logically true, and what is logically true is trivially true."

We learn something about Francis Bacon when we know that he is not the author of Hamlet and that he is a writer of essays. But "Bacon is not the author of Hamlet" is an illustration of the law of contradiction; "Bacon is a writer of essays" is an illustration of the law of identity. Bacon being what he is, and the author of Hamlet and a writer of essays being what they are, Bacon necessarily excludes the one and is to be identified with the other. Granted that propositions are necessarily true because of the logical laws they in fact embody, and that logical laws convey no information, it is nevertheless true that propositions which illustrate logical laws are often informative. The propositions are necessarily true because of the logical laws they embody—but *also* because of the way they embody them. When we say that "Jones is Jones" we say something other than "Smith is Smith". There is one law illustrated in both but it is illustrated differently. The content of a necessary truth is not irrelevant to it, but gives it body, enabling one to distinguish one illustration of that truth from another. The objection erroneously supposes that if content does not alter the truth of a principle, it adds nothing to the principle. It is an error similar to that which would be committed by one who maintained that, because fruits were edible, one could never eat an apple but only the fruitiness which it shared with oranges and pears.

Nor, as a matter of fact, is it true that logical laws convey no information. In an obvious sense they are informative in that they reveal necessary connections of which we were previously unaware. Modern logic has brought into focus many necessities which traditional logic never knew; it sometimes requires considerable reflection and analysis to show that they are true. How evident is it that "'p implies q' is equivalent with 'q is equivalent with p or q'"? Other structures are simpler and more familiar, and to that degree more "selfevident"; but for each individual these too once had the status of novelties and contributed their modicum of instruction.

We can go further. Logical certainties are informative not only

because they exhibit necessary connections of which we were formerly unaware, but because they are synthetic truths. They convey information just as all other truths do. They never merely repeat in one part what had already been assumed in the other. Truths of identity rest upon prior acts of identification; truth of opposition upon prior acts of distinction. "Black is black" (viewed as an identity, and not as an abbreviation for "what is black behaves as black things are wont to do") is an identity which depends for its meaning and being on a prior act of identification of distinct instances of "black" as being equally satisfactory instances. "A black cat is black" is an identity only because we have succeeded in identifying an isolated "black", a "black" which could be the black of dogs or pigs or paint or night with the particular black of a cat. "A black cat is not a white cat" depends on an act which distinguishes "black" and "white" as opposed. All these so-called analytic truths are synthetic products, the result of acts which go beyond and outside the subject in order to find a predicate to which that subject can be necessarily related. It is only in the character and amount of content that these differ from the formal logical truths "xy is x", "x is x", "x is not non-x".

Stated this way, our account of logical necessity seems to hinge more on what we do to discover logical truth than on the nature the truth has in itself. This stress, of course, was necessary, for so far as we are concerned with the amount of information conveyed, or with structures carved out by logicians rather than discovered by them, we cannot avoid bringing in a reference to man and the process by which he learns even the barest of truths. But the same point, that logical truths are informative, can be made by looking at the truths themselves, apart from their place in human learning. They, like every other truth, must have some filling; otherwise they would be so empty that there would be nothing in them to stop or sustain a thought. Logical certainties are formal and abstract, not because they have no filling, but because they have the thinnest possible filling, the meaning of reality or being as that which is present in anything. The terms "x" and "non-x", which are related in a logical truth, have and must have opposed senses, and it is the senses that they

have which determine what structure unites them. There is no structure "other than" floating in the nowhere, attached to nothing; it is the structure of a truth about opposed entities. Take out the "x" and "non-x" and hold on only to the "other than", the law that "x is not non-x" then vanishes before our eyes. The truth that a law of logic does not depend for its being or meaning upon the presence of any particular entity ought not to be confounded with the falsehood that a law of logic is independent of every possible entity. It is because there are terms in opposition that there are structures of opposition, tinged with the meaning of that which is opposed.

We must give up the distinction between analytic and synthetic truths which Kant established and which the positivists and logicians have taken over. All truths are synthetic, whether they be formal or material, necessary or contingent. But then no one of them can rightly be said to be tautological, empty, repeating in one part what had been affirmed in the other; instead they must all be recognized as significant, as possessing filling, as bringing together different entities and being modified thereby. Certainties, no less than non-certainties, are significant in themselves and are capable of conveying information.

5. *AGREEMENT AMONG PHILOSOPHERS.* (b) Though certainties are significant in themselves and can convey something to those who come to know them, it may nevertheless be the case that their meanings are in conflict, making impossible the acceptance of a number of them together. If this were possible, either (α) there is no selfconsistent set of all certainties, or (β) if there were such a set, we could not know it except by making it selfcontradictory.

(α) Logicians have no difficulty in showing that necessities, taken in the abstract, are compatible. In fact, it would be reasonable to define logic as the discipline which takes as its own the view that all formal necessities form a selfconsistent set. But it can nevertheless be maintained with plausibility that the relation of compatibility, like all relations, brings together disparate entities, and that there is always a question whether the entities brought together continue to retain in the new situation the natures they had in the old. In some

cases it seems quite evident that what have been brought together are necessities which cannot both be true. If a relation of compatibility is to hold between them the character of those necessities must be changed. Thus, to take an instance from ontology, "I always am I and never another being" is true; so is "I am always changing, becoming what I had not been before". But the two seem to be in conflict. To take an instance from the field of value: "There is and must be a single ethical code" is true, for it prescribes the good for man as man; yet "There are and must be different codes for different men" is also true, for men differ from one another in nature and need and in the work they do. Finally, to take an instance from the field of knowledge: I know that it is impossible for me, who am not omniscient, to know everything—"I know that there is something still to know". Yet unless I know this something I cannot say that it is there to know, so that it is equally true to say: "I cannot know that there is something still to know."

In all three fields of philosophy there are necessities which seem to be in conflict with one another. It is to be noted, however, that these conflicts arise only because they are thought to have the same subjects and opposing predicates. There is no incompatibility between "I am always I", and "there is something still to know". Most of these conflicts—perhaps all—vanish once a distinction is made between the different ways in which the subject and predicate are being used. Should there prove to be any recalcitrant cases it will then of course be true that, as concretely together, the necessities remain necessities but cannot be compatible, or that they cease to be necessities and thereby become compatible. In the former case, we would have to say that there are necessities which are in actual conflict, and that the nature they constitute together is selfcontradictory. But, since the selfcontradictory cannot be known, this will be tantamount to saying that we do not know what this ultimate nature is. Yet if we do not know what this ultimate nature is, we cannot legitimately claim to know that it allows necessities to conflict with one another within it. In fact, since contradictions tear things in two, we must affirm that there could not possibly be a single thing within which necessities are in irreconcilable opposition.

If, which is by no means evident, there are necessities which are opposed to one another, they cannot constitute a single fact. Either then they have different subjects, and are thus necessities but not in conflict, or they are ingredient in the same situation but not in conflict because no longer possessing in the concrete the natures they manifest in the abstract. Opposing necessities, necessities which deal with the same things in opposite ways, if any there be, are abstractions which become irreconcilable only by being torn out of context and turned into selfsufficient certainties.

The occurrence of an apparent opposition between necessities should occasion an investigation as to whether or not they are really opposed. If they are really opposed, one ought to search for the concrete situation in which their natures are qualified and their opposition thereby reconciled. Should the Hegelian claim, that everything short of the absolute is riddled with contradiction, be true, then there is nothing else to do but to hang on to the Hegelian juggernaut and pass from conflicting but abstract necessities to an ultimate concrete which transforms and reconciles them. This is a possible view. It suffers from the embarrassment, however, of affirming that everything we know, short of the absolute, is partial and false, while supposing that any apparent conflict can be truly known to be a real and inescapable conflict. If the Hegelian view were correct, what seems to be a conflict would not, even as apart from the absolute, have to be one. If the Hegelian view were incorrect, one would not have to have recourse to the absolute in order to reconcile whatever appeared to be opposed.

Since no one subject can be subject to opposing characterizations without being thereby divided in two, and since without a common subject no real conflict can ever occur, whatever certainties there are cannot possibly be in one another's way. There cannot be a set of certainties which are in irreconcilable opposition; all that there can be are a number of certainties apparently dealing with the same topics in opposing ways but actually concerned with different topics in different ways, or a set of certainties dealing with the same topics in compatible ways and appearing to deal with them in opposing ways.

(β) It seems patent that philosophers disagree. One holds that

there is nothing but matter, another that there are only minds; one denies that there is such a thing as causation, another rests his whole view on its existence. One philosopher believes the world has a purpose, another that it has none. Some hold that the world has a beginning, others that it has not; some say that there are atoms, others deny that there could be any. The list is long. And it is not very difficult to add to it. It would be a mistake to conclude from the existence of such a list that philosophy is nothing but an expression of opinion which can be countered with equal assurance and right by another. The oppositions are almost as old as the subject. If they expressed merely the opinions of different men, there would be a mystery in the fact that the most penetrating minds even today take those opinions seriously. Why do they focus on just those opinions, since there are many more which have been expressed and never seriously considered? Almost every week there is a new theory of knowledge, being or value presented to the public. They are easily as bold and often as elaborate as those which receive favored positions in the histories. It is impossible to view the history of philosophic thought as a series of opinions without arbitrarily denying the value of the subject in the first place, and, in the second, showing that it omits much more than it contains.

The history of philosophy is of interest because philosophers offer not opinions but certainties, truths which are inescapable and hold for all times and for any one. But if this is so the existence of opposing views presents a problem. If philosophers disagree, either they do not know certainties, or the certainties that they find are in conflict. We must choose between these alternatives—but only after we have made sure of the truth of that from which they follow. The first question is: do philosophers disagree?

Though a superficial glance at the history of thought reveals radical oppositions, a more careful examination exhibits an astounding degree of agreement. It has been said that every philosopher is either a Platonist or an Aristotelian; yet it would be very hard to find a significant point on which Plato and Aristotle clearly diverge. There are a number of points of explicit disagreement but these are minor, incidental, of too little interest to merit the attention of most

historians. But perhaps this is due to the fact that Plato was not really a Platonist or Aristotle an Aristotelian?

If we define Platonism and Aristotelianism apart from Plato and Aristotle, there is no doubt that they can be made to diverge. The one maintains that man is only a soul, the other that he is a soul and a body; the one affirms that there is a pure justice or good somewhere in the nowhere, the other maintains that justice and the good are ingredient in concrete just and good acts and beings. But do the former deny what the latter maintain, or do they accept the latter's view while insisting that there is something else as well? Do these men represent an opposition in positive doctrine? Or is it rather an agreement, one of them merely going a little further than the other, and being criticized for going beyond what the facts warrant?

It is fashionable to divide philosophers into rationalists and empiricists, the one ignoring experience and reaching a universe by mere cogitation, the other taking experience seriously and trying to understand the world in terms of what is daily learnt. But how far apart are the two? Certainly the classical representatives of these views entertained the same central notions. Both hold with equal fervor that what is clear and distinct is true, that what can be separated in thought exists separately in fact, that the world of common sense is neither real nor ultimate, that the emotions teach nothing about the real, and that there are no final causes. They differ, to be sure, but how much of their difference is due to the fact that they do not deal with the same issues, or that one is concerned with domains with which the other refuses to deal?

It would not be easy to answer these questions with a round negative. Philosophers are very much in agreement. It would perhaps be better if they disagreed more, for it seems evident that many of the views they share reflect the prejudices and presuppositions of a common civilization, and do not express the nature of things. It is part of the task of philosophy to cut through established views to the truth which lies behind them, but it is not easy to free oneself wholly from the culture of which our reading, our words, our habits and our customs are an integral part.

A much stronger case can be made out for the thesis that philoso-

phers agree than that they disagree. But then we must account for the fact that there seem to be many philosophies, and that in each one we find explicit denials of explicit contentions made in another. The diversities are not, however, so much a diversity in result as a diversity in emphasis, in order of treatment, and in the places where caution and criticism are exercised. The explicit denials of one philosopher of explicit affirmations made by another are, for the most part, denials of truths wrested from their contexts.

We can go far in maintaining that all philosophers agree. Yet there are evident points of disagreement. And if there were none, we could create them by denying the common presuppositions on which the classical views rest. There are and can be cases of real disagreement. But then it must be true that one group of philosophers at least is mistaken, or that the conflicts between the different groups are reconcilable if we diversely relate the opposing views to the objects which they diversely characterize. It is wrong to conclude from the fact that philosophers disagree that both of them are wrong; the disagreement requires only that one be right and the other wrong. But should it be true that both are right, that each has brought into focus certainties which oppose the certainties of others, then they must be in fundamental agreement.

We can test the assertions opposing philosophers make. Their assertions can be antagonistic only so far as they refer to the same object, and we must turn to that object, engage in a philosophic quest, to see which one is right. If the object allows both assertions, those assertions cannot be opposed. Oppositions tear the object in two. Only if it is one, and thus without internal discrepancy, could it be the locus of the supposed antagonistic assertions. If philosophers disagree, and both enunciate certainties, those certainties must be aspects of a deeper and more coherent one.

To make the point that known certainties do not form a self-consistent set, it is necessary to suppose that the process of knowing itself forces an irreconcilable opposition between otherwise compatible necessities.

To know is to abstract, to hold things apart from the concrete. The truth "this is a chair" is other than the chair. The latter is con-

crete, one, showing no marks of a distinction between a "this" and a "chair"; the former is abstract, complex, synthetic, uniting disparate entities apart from the concrete chair. Within the concrete chair all oppositions are overcome. But what is there to overcome the oppositions which the items of knowledge, as held apart from the concrete, might present? Though there can be no inconsistent set of certainties in fact, there can apparently be an inconsistent set of certainties for thought. If this be so, the philosophic quest, since it is concerned with the acquisition of knowledge, would be one which gathers certainties only at the risk of having them cancel one another out to leave nothing known.

Grant that to be is to be other than to be known, and that certainties are or can be known, then one grants that a knowledge of certainties may be futile and selfdefeating, even though those certainties are reconciled in fact. A knowledge of certainties could, in virtue of the distinction between knowledge and being, involve oppositions which are irreconcilable because divorced from the concrete objects which could reconcile them.

To know that certainties are in conflict, however, it is necessary to know them together. We cannot see them clash unless we can see them in contact. They must be present to one mind at one time. Yet a mind in which they were present would be a mind divided against itself, internally disrupted. If necessities are present together in a single mind they can no longer be in opposition; if they are in opposition that mind is no longer one and there, therefore, cannot be any ground for asserting that *one* knows that they are in opposition.

It is no more possible to get irreconcilable oppositions in our minds than it is to get them in the body of concrete beings. Logic applies to minds as well as to things, and cannot tolerate the existence of a contradiction in the one any more than in the other. We cannot think of a round-square; we cannot know that one and the same thing is round and square in the same respect. When we refer to "round-squares", when we "contradict" ourselves, we do not perform the miracle of thinking what cannot be thought. Instead we continue to keep the opposing elements apart, and fail to find a single locus for them beyond, or we unite them to express the nature of an undeter-

mined region of space. A "contradiction" has too much meaning for a single determinate subject; either the subject is indeterminate or there are two determinate subjects which hold the contradictory elements apart. Elements which are irreconcilably opposed either have distinct subjects or, since together they say nothing determinate, express the meaning of some limited domain as indeterminate. "This is blue and not blue" is a way of saying that the color of this is indeterminate. If the "blue" and "not blue" are held apart they are distinct predicates having undiscovered distinct subjects. Contradictory terms never clash, because they are either united to constitute the meaning of indeterminateness or are kept apart in fact and thought by actual or prospective subjects. If then, philosophic assertions are self-contradictory and refer to one reality, they must express the fact that reality is indeterminate. This would not mean that philosophy was meaningless but only that its object was indeterminate.

When we counter "There is an absolute good" by "there is no absolute good" we are presumably speaking of the total universe in both cases, and are characterizing it as one which is indeterminate as regards value. If we take the universe to be determinate, we hold these two propositions apart, referring one to the determinate realm of the ideal and the other to the determinate realm of transient occurrences. Neither of these realms may be determinate throughout. The ideal may have no further determinate nature than that of being good, and the realm of transient occurrences may have no further determinate nature than that of being imperfect. If the whole universe has a determinate nature, all criticisms of philosophy as selfcontradictory are answered in general and in advance by pointing out that the facet of reality with which philosophy deals is not the whole of reality and that the criticism has some other facet as its object. And when philosophers "contradict" themselves and one another they must be understood to be talking about different things or about that aspect of reality which is indeterminate, and which they are trying to express in determinate terms.

We cannot show that philosophy must be selfcontradictory unless we can show that the universe must be indeterminate. But such a demonstration is philosophic and must itself in the end turn out to

be indeterminate. A determinate knowledge of the indeterminate is possible only by relating the indeterminate to the determinate and thereby making determinate how it differs from the determinate. The most we can hope to show is that certain types of philosophic assertion, because dealing with some indeterminate realm, are "selfcontradictory". But this supposes that we have a philosophic grasp of at least the determinate realm and thus have certainties with respect to it.

When we find contradictions in philosophers we must convict them of vagueness. The vagueness would be legitimate so far as the object is incurably indeterminate; it would be illegitimate so far as the philosopher had in mind two distinct objects which he did not distinguish for himself or his reader. When two philosophers make opposing remarks on the nature of space, time, individuals, the good, and so on, unless we know that these items are intrinsically indeterminate, we must understand one as referring to one aspect and the other to a different aspect of the same determinate fact, or we must understand both to be arbitrarily determining an ultimate indeterminate reality. If one philosopher enunciates a certainty and the other denies it, the latter must be understood as having treated as indeterminate what the former knows is determinate. He who tries to maintain that both are right leaves both behind to affirm that there is an indeterminate object of which the determinate assertion of the first and the indeterminate assertion of the second are limited formulations.

Philosophy is a quest for certainties. Such a quest, we have tried to show, is both possible and meaningful. Along the way we touched its goal at various points. We stated a number of philosophic certainties, truths it would be absurd to try to deny. I will restate them, supplementing them with others to make a round dozen. I hope they will serve as a focus, as a summary, as a stimulus, or as a challenge.

1. *I cannot meet myself coming towards me.*
2. *It is wrong wantonly to kill one's friend.*
3. *I always will be ignorant of some things.*
4. *All beings are imperfect.*
5. *There are multiple realities.*
6. *All truths are synthetic.*
7. *The known and knowledge are distinct.*

8. *Whatever men do is absolutely wrong.*
9. *Whatever men do is absolutely right.*
10. *All beings have a freedom to act.*
11. *Some assertions apply to themselves.*
12. *Supposed denials of the foregoing have different subjects than the foregoing.*

I have tried, in different places,[1] to make evident the necessary truth of each of the above. What is yet to be made clear is the method by which these and similar truths are discoverable. But that is another story.

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[1] *E.g.*, in *Mind*, XXXVII, pp. 338 ff.; *Reality*, pp. 160 ff.; *Ethics*, LVI, pp. 39 ff.; and in my forthcoming *Nature and Man*, pp. 1 ff.

THE LANGUAGE OF SHAPES AND SIZES IN ARCHITECTURE
OR
ON MORPHIC SEMANTICS

BUILDINGS have meaning in terms of their function. We understand doors or windows in terms of their uses. But we seem also to understand something beyond this utilitarian function when we look at buildings. They are said to exhibit some form or structural regularity not required by function alone. Shacks fulfill the requirements of use without such form. On the other hand, structures such as a triumphal arch may have some function but no usefulness; they are constructed with the object of arousing or expressing religious or national feelings. The Gloriette of the Schoenbrunn Palace in Vienna has only the esthetic function of forming a nice background for a piece of garden architecture. A minaret is not useful in an utilitarian sense; the faithful can be called to prayer without it. It is the architectural expression of the idea of convocation to prayer. But how does the architect achieve such aims and why do we understand his work?

Judging from our verbal approach, we seem to consider architectural forms as being meaningful in terms of emotion and thought. We do not look at them merely as embodiments of pure usefulness nor as an arbitrary combination of lines. We say that buildings are dignified, that they possess sternness or charm, that palaces are glorious. We say that their lines are sharp or soft. We thus attribute to them a sort of personality and see character in the lines of a structure. We read architectural lines as though they were elements of a language

of thought and emotion; we not only look at buildings as living quarters, but we tend to interpret them as a non-verbal language. How could we otherwise notice in them charm or sternness or glory?

Any architectural structure exhibits some basic *regularity* without which it could not be a specimen of architecture. To say that it displays form is to say that it displays some internal regularity. It may, however, exhibit circularity (rotundity) or angularity (straightness) or a combination of these configurations, and nothing else. The predominance of one of these generic forms or a combination of them determines style. Every style is a style owing to the predominance of such features. Another important factor constitutive of style is the varying degree of preeminent perpendicularity or horizontality of a structure. Pointedness partakes of both angularity and perpendicularity.

The esthetic phenomenon called style is not functional, that is, has little to do with the function or the purpose of the building. It is rather the chosen slant or the assembly of lines or the morphic aspect of the building. Whenever we build, we cannot escape that choice. Here choice means emphasis and the emphasis is stylistic, not utilitarian, in purpose. In a similar way white stone stripes in a red building are stylistic elements which are superfluous from a practical point of view but the absence of which constitutes stylistic choice, because unbroken redness or any particular color or combination of colors is of stylistic relevance; we react to it in term of feelings and thoughts.

While an obelisk or a globe placed in front of a building is a single stylistic element, never destined for use, style within a structure consists of repetitions of a number of elements. Without a discoverable system of correspondences within the structure there can hardly be any style. If the correspondences are angular or circular or horizontal or perpendicular, the resultant style necessarily varies. The whole will always be an arrangement aiming at some morphic order which is achieved by repetitions of similarities of shape, position, and the like. The repetitions that form correspondences lend to the whole the quality of reasonable consistency which in turn is felt as satisfactory. The satisfaction is mediated by thought, because we see the satisfactoriness of the arrangement after having discovered

it through inspection followed by reflection. It should be stressed that the satisfaction is not perceptual in character. Perception may give us the elements of the arrangement, but the fact of arrangement is discovered by reason. The fact of correspondence will always be apparent as constitutive of the arrangement whether the unit of arrangement be a column, an arc, or an arched window. The rotundity of the main body of the building will, for instance, be matched by other roundnesses such as a cupola or an oculus. The principle of arrangement will of course be expressed in different particular ways, but it always entails regularity through repetition.

Let us consider the column of a building. It was originally scarcely more than a trunk of a tree, a wooden means of support, that is, an engineering device perhaps more primitive than a wall. As the trunk was polished and made smooth, the polishing increased the regularity of the trunk. A perfectly round cylinder does not exist in nature; it is an artistic achievement, and the sheer rotundity of the column creates innumerable, internal correspondences. A brilliant surface enriches still more the inherent correspondences. Subsequent fluting has a double purpose. The flutes produce new circularities within the basic circularity and multiply the visible amount of correspondence. On the other hand, the dead weight of unbroken rotundity is diluted by the fluting. This means, of course, internal differentiation in apparent contradiction to correspondence. The differentiation is not haphazard, however; it is organized. The column becomes, as it were, a living being, a rational organization. The basic roundness may seem broken, but it persists nevertheless as an overall characteristic of the whole organization. The break is accomplished by new circularities, the flutes, which really repeat the main circularity. The column is thus internally differentiated, but the differentiation is organized into a pattern of rigidly corresponding elements. The diversity or, rather, differentiation, is there, but it really consists of correspondences. The morphic principle of regularity rules the whole organization, but enlivening differences result. This result is an effect of the differences, and the spark of reason is visible in the regularity. The structural articulation is thus on a higher level, since every flute is a new roundness and corresponds to the roundness of the whole. A break

of the roundness is also there, shown by the sharp edges and the straight lines of the flutes. Thus a sort of sheen emanates from the fluted column, like an aureole, which may be stressed by coloring or gilding. The edges of the flutes create in addition a new set of correspondences with the straight lines of the main body of the structure. The net effect of all this is vitalization.

Just as the flute becomes an organizational unit within the column, the latter plays the same role within the more complex, higher organization of the colonnade which brings about a multiplication of correspondences as well as higher differentiation. Thus a constant organizational principle dominates the larger framework. A colonnade is not merely a device of support; it is rather an order of support. Style is thereby injected into the structurally indispensable part of the building; the supporting device becomes at the same time a principle of regularization. But such a principle of regularization as a colonnade is multisignificant; it means more than mere order because it is not abstract; it is done within a certain emotional and intellectual context. It may embody the idea of circumambulation around the shrine of the deity and thus be an act of worship hewn in stone.

The persistence of repetition shows the fact of organization in a work of art. The flutes are organizational stresses and resemble rhymed endings or metric correspondences. Style consists of such stresses. Whenever a building is subjected to a specific law of morphic regularization, we have style. Stylistic rigor, a law of regularity, prevails in a Gothic church just as in a Doric temple, although on a higher level of complexity. If Doric order suggests the regularity of hexameters, the interlacing correspondences of the Gothic edifice recall perhaps the structure of sonnets or of the terzina of Dante. We see in both instances a higher degree of artistic stress on a more complex organizational level. The main ogive of the Gothic arch is often broken up into segments conducive to new multiple internal correspondences. Corresponding turrets, the arrangement of windows, obey a similar principle. It is another kind of metric order.

Evolution of style shows as a rule increasing complexity, *i.e.*, internal differentiation tied up by correspondence. Thus, for instance, in the course of evolution the half circle of an apsis is broken up into

corresponding segments as units of a more intricate organization while the basic shape of the apsis is unimpaired.[1] The octagon of the Kubbet-es-Sakhra mosque in Jerusalem may be conceived esthetically as an internally differentiated circle. Even a single window may be internally organized if, for instance, the surface is broken up into many corresponding squares. Such organizational types are perhaps prefigured in natural organic systems and may be the core of any esthetic arrangement; an arrangement internally differentiated and externally coordinated according to the principle of regularity might be at the bottom of all systems of order vaguely designed as beautiful. The time-honored principle of unity in variety involves in reality nothing else than internal differentiation and external coordination according to the principle of regularity. Differences organized by correspondence constitute a higher type of regularity than mere uniformity. The latter is not alive with differences; it shows therefore neither life nor real organization nor rational unity; being only a factual unity, not a rational one, it is unable to exhibit unity in a work of art. To do that, it must be more than uniformity; it must be rational unity, unification. In architecture regularity is demonstrated through structural articulation, differences bound by correspondence.

A few instances of the structural speech of architecture are in order. The architect may be confronted with the problem of three adjacent windows. If contiguous, they do not constitute an organization or a living or rational structural whole merely by virtue of their contiguity. But if the second window is stressed by some structural device, such as enlargement or a frame or a decoration, it becomes structurally the middle window, while all three windows now are a structural whole with an expressed and not merely potentially existing middle. They exhibit the fact of organization in a generally comprehensible, structural way. An intelligent arrangement is thus shown; it has the connotation of style. Again, if part of the structure is to be its top, the latter obviously must be differentiated from the rest of the structure, otherwise the top may remain artistically non-existent. Mounting height may be expressed through recession of the upper

[1] Compare the early Romanesque apsis of the church of Aulnay de Saintonge with the apsis of the Cathedral of Amiens or of Le Mans or the Renaissance apsis of St. Pierre in Caen.

stories.[2] Recession creates a sort of visible ladder or a tower, all of which is suggestive of height. Decreasing size of windows within the walls also expresses height, which is assimilated in this instance with distance because distant objects seem smaller. A colonnade, too, shows not only orderly support but also the weight of the roof. We see in all these cases the working of the artistic principle of direct expression through material, non-verbal (conceptual) means.

The small window is not real nor is the suggested distance or architectural height natural height. Thus we get the concept of artistic height as different from natural height, as poetic truth is different from scientific truth. Architectural devices aiming at the suggestion of height are akin to the technique of metaphors in poetry. The hyperbolic, material element of the metaphor makes for its suggestiveness or imagery. When the architect employs steepness and multiplication of turrets to stress the height of the Gothic edifice, his procedure does not differ basically from that of the poet trying to convey the idea of the brilliancy of eyes by evoking the simile of the torch.

A façade, likewise, is similar in function to an overture of an opera or the proemium of a poem. It is supposed to show the general character of a building. This is a purely expressive, not a practical function. It is akin in character to such creations as a triumphal arch, the Gloriette and the like. The façade contradicts the tenets of pure functionalism. There is sometimes a discrepancy between façade and interior of the building. Balance between exterior and interior is rare, but insofar as utility goes buildings may exist without façades.[3]

In architecture the principle of organization must be morphic because of the material of this art. Here the principle of regularity as the intellectual basis of the organization is reasonable and satisfactory. It would be unsatisfactory as a principle of organization if used in such preeminence in other arts, for instance poetry or painting,

[2] The principle of recession was already used for this purpose in the old temple of Adu-Anad of Ashur, and is reappearing in modern skyscrapers.

[3] The splendor of Hagia Sophia, the charm of Santa Maria la Blanca or of the Sinagoga del Transito in Toledo, the enthralling grandeur of the Mosque of Cordoba, have no correspondence in façades. Neither the triumphant whiteness of the Milan Cathedral nor the multicolored front of the Florentine Duomo are in congruence with their respective interiors. Notre Dame of Paris and the Cathedral of Siena perhaps exhibit such a balance.

because human actions or thoughts or emotions (events) cannot be organized merely by morphic means. The building is, as it were, supposed to show its wholeness and consistency at a glance. Its wholeness is, of course, twofold: it serves some practical purpose, but it may be a morphic whole whose structural organization shows a geometrically regularized unity of shape. Its parts have thus a double status. Internal correspondences show the unity of its morphic principle. Apparent dissimilarities are grouped into correspondences; sometimes a dissimilarity serves the purpose of a solitary accent, for instance a tower or a rosette, but even their articulation will exhibit the morphic law of the building. The morphic law creates an order of shapes, while a certain principle of engineering rules the practical purpose of the building. This is also the pattern of living beings; they are internally differentiated, yet subject to some principle of cohesion and exhibit morphic correspondences, an organization of shapes. An architectural structure is thus, as it were, an effigy of living things and governed by analogous principles.

The morphic principle of regularity is an intellectual ideal, a postulate of reason. When we are seeking desirable proportions in bodies and faces as a matter of beauty, we are influenced by this principle. To arrange and to order are natural inclinations of the human intellect. The morphic organization as evident in architecture is the simplest, most primitive kind of intellectual organization since it is concerned only with shapes, the looks of things.

To comprehend a thing means as a rule to grasp its structure and to know its build or composition. The proof of understanding lies in the ability to reconstruct the thing out of its components. This goes for watches as well as for natural things. So far as living beings are concerned, comprehension of structure is not entirely satisfying. Here we are looking for motives, knowing that we ourselves act according to motives, whether that be because or in spite of some structure. Pure functionalism would mean that the building is or ought to be merely the objectivation of the purpose. But even assuming that bodies are objectivations of motives, it is nevertheless true that we can tell beautiful from ugly noses, for example, although there is no practical difference between them. In such instance we

are seeking or, rather, implicitly adopting a standard of good order or proportion beyond utility. We may understand better the orderly expression of a motive than an ugly or indifferent one. We should, however, bear in mind that we like an expression because we like the expressed idea. A hair-do may please because of the inherent morphic arrangement, but it may be preferred because of custom. Or it may represent something that we like; and this introduces a symbolic element into the appreciation as an additional complication.

It is doubtful whether to understand things is more than the ability to order them. We understand only the things that are susceptible of arrangement according to some principle. But it should be added that we are able to discover and to apply such a principle only when we understand the things in question, that is, know their essential action. We certainly order the world through identification of shapes, and shape as such has a connotation of value as the word "shapely" shows. Conceptual arrangement, however, does not proceed only on the basis of shapes, although it may have originally been connected with shapes (see genera and species), but according to some principle of action, the assumed essence of the things. A shape as such is an organization on the basis of regularity and may function as an organizational unit of a more complex morphic organization. A principle of order is always demanded by reason, and it is necessary that a building (which is an enclosure) assume some geometrical configuration, composed of shapes as sub-units. Given the purpose of the building, its order will be based on a morphic law although the particular kind of order may also be determined by emotive reasons, likings, a *Weltanschauung*. When we are to order appearances, the simplest and naturally given kind of order is based on a morphic organization. The units of this system are shapes organized into correspondences. In the conceptual sphere the touchstone of the wholeness of its units lies in the action of which such a whole is capable. In regard to a building, it lies in the purpose which the building fulfills; but in regard to the appearance of the building, it is grounded in the style or the underlying morphic principle of organization. The building is a geometrical organization in the purely morphic sense of the term, as its internal correspondences may show:

angular (cubic) towers are topped by angular pyramids, cylindrical structures by cones, a rectangular body will be topped by a triangular form, while spheres merge into cupolas. This correspondence is the architectural logic of the building and the violations of these rules are infrequent. The basic shape is co-determined by some meaning which we associate with it, mostly for emotive reasons. Thus the intellectual language of regularity in architecture gets an affective warmth and a symbolic aspect rooted in our affectivity. While top or height, for instance, may be expressed by circularity as well as by angularity, the choice of the particular shape is significant. It is rooted in the affectivity which is the clue to the symbolism of line, color, material and structure. But when all this is said, we should not lose sight of the fact that regularity has in itself affective value because we like order.

Fondness for order is also love of reason. In its progress, the human mind discovers laws. It exercises thereby an organizational activity consisting of the steadily expanding discovery of ever new regularities and of the underlying units or wholes, the supposed carriers of these regularities, namely the subjects of the power in action. In architecture mind constructs order dictated by a purpose but articulated according to an adopted morphic law co-determined by the emotive value of the accepted unit of shape.

Style may be said to be a system of morphic regularity which provides an intellectual satisfaction in virtue of this systemic regularity. In this way we get comprehensible schemes of shape, easily discoverable patterns. A pattern is a systematic regularity. A combination of lines or elements apt to be conceived as a whole is an instance of a pattern. Wholeness as such is a regularity. We probably experience wholenesses in the first place morphically as closed continua and thereafter essentially as carriers of potential or real unified action. If the world is to become comprehensible, it must be organized into wholes of shape or action or both: otherwise it would remain chaotic and unsuitable for life. Wholes are therefore units of repetition, recognition, or identification; they are units of systematic regularity and correspondence. From a stylistic point of view architecture is concerned with the morphic side of wholeness. The practical

purpose of the building corresponds to the unified action or essentiality of wholenesses. This means that in architecture viewed as an art the organizational activity of the human mind or of reason is dealing with the simplest wholes, namely those of shape, wholes on the level of externality. A triangle is an ideal not real whole, but it already contains the elements of correspondence (and repetition) in its edges, sides, angles, etc. It is a morphic whole, a reasonable and satisfactory construction conceivable as an exemplar of regularity, amenable to use as a standard shape. Styles are types of morphic regularity, as valid as racial types which are also types of systematic regularity from the morphic point of view. The basic shape makes style comprehensible as an organizational arrangement. Style is the vehicle of reasonableness in the world of structures.

A chosen style should be satisfying in terms of its own morphic law. Once a system of regularity has been set up, its practical instances must satisfy its own law of shape. The Doric building must be satisfactory in terms of the Doric system and a Gothic edifice in terms of the adopted Gothic system. The specific morphic law is autonomous; it would be nonsensical to approach a Gothic cathedral with a Renaissance standard, or vice-versa. The question of relative excellence of such types from the esthetic point of view does not differ essentially from the question whether a lion is more satisfactory than a chinchilla. Different morphic laws obtain in these cases. The particular law of shape exhibited by some style is grasped intuitively through inspection.

If an internally differentiated structure is unified in virtue of the principle of regularity working through the inherent correspondences, we get the artistic result called composition, which implies at least one characteristic: an ideated whole ruled by a willed order that constitutes its unity. Faced with the result of this activity, we speak of diversification, unity in variety, life, etc. It is important that such order, nay, any order, has such a positive emotional value, that we speak of decoration or ornamentation whenever we see an instance of order. There is according to our feeling a decorative element in it, and yet the decoration consists only of order. The mere fact of order in the arrangement of columns has ornamental value.

This is the most basic and the simplest kind of decoration. Another kind of it is the internal differentiation. Thus the internal differentiation of an element, for instance a column, has decorative worth. This is true of a fluted column, which is ornamented as compared with a smooth cylinder. But the differentiation must be tied up by some correspondences; otherwise the effect of ornamentation would disappear. It will be generally accepted that the noblest form of decoration in architecture is structural. This means that it does not consist of added ornaments, as earrings in relation to the body, but of the proper order of the constituent parts. All this shows that decoration is basically the expressive articulation of a thing while added ornaments are expressive additions to the thing.

Style as regularity is also simplification. An unifying morphic law that illumines a whole reduces its internal diversity to relative simplicity. Regularization is simplification but on a higher level of complexity. Style is thus a return to the simple. As a device of morphic organization it means simplicity. We speak sometimes of stylization in a somewhat different sense, namely, when we reduce a complicated structure like a plant, for example, to its bare outline and thus unmask its morphic law. This, too, is simplification. But in architecture we construct the simple.[4] Merely as a device of morphic organization style means decoration, and yet also simplicity. When we organize speech by injecting a metric law of sequence, we simplify the sequence of words; as a result we get a simplification which is also decoration, life, color, because the word-material is ordered on a higher level of complexity. Analogically, style may be viewed as an orderly stress achieved by a consistent use of an element of stress, whether that be a flute, a circle, or an ogival line. The repetitiveness of the stress creates the pattern of the structure, its morphic law, that is, the organizational principle endowing the structure with the character of wholeness in addition to the inherent wholeness of the purpose of the structure.

If an element is emphasized in a building without utilitarian reasons, the emphasis is plainly architectural or stylistic in purpose; it

[4] Viewed esthetically geometrical figures may be regarded as stylizations of natural things or natural relations.

also carries intellectual and emotional connotations.[5] Repetition viewed emotionally is the stressing of a point; it is, as it were, the emotional source of the intellectual act of arrangement. The correspondence thus created functions in architecture like rhyme and rhythm in poetry. The architect speaks his mind more than any other artist by means of regularity and correspondence. Both music and architecture will depend preeminently on the principle of regularity as the basic law of organization, because they do not deal with persons or objects in the usual sense. They lack the conceptual framework although they have a conceptual background. The internal correspondences of architecture, circularity, ogivality, and the like, remind us also of the ever recurring connectives of speech (the morphemes).

From a morphic point of view alternation of free space and masonry produces regularity full of correspondence and has expressive value. The shape of the apertures has a bearing on the impression of lightness or heaviness of the building. If the interruptions within the heavy wall are frequent and slender in their curves, we speak of lightness or elegance. Much air and light obviously means little weight.[6] As for the valuation of slenderness, it might have something to do with our appreciation of youthful appearance. Free space in form of an oculus or a cupola is a solitary accent of structural stress, perhaps a structural caesura.

The amount of light within a building may be used as a means of expression, that is, stylistically. The sense of piety that prefers penumbra in a church differs from the ideas of a man introducing dazzling clarity into it. The Lower Church of Assisi has heavy vaults, low ceilings, and is almost completely dark. It expresses asceticism, but it does so by means of structure and not by rejection of art.

Size affects vitally the aspect of, and the response to, any shape or structure. Its bearing on style is obvious. A mountain may be impressive more because of its size than of its shape. A skyscraper

[5] The gables of the wooden church in Borgund, Norway, are doubled for no practical purpose. This doubling is therefore a stylistic act, expressive of a spiritual content.

[6] Therefore the Procurazie Vecchie of Venice are light. Even the Flavian Amphitheatre is by no means heavy.

and a cottage may exhibit Gothic lines, but they are really of a different style. In the skyscraper the size is perhaps the fulcrum of the creation; its design is submerged by the mass. It is, however, also clear that a model of St. Peter's will not produce the same impression as the real church. The Milan Cathedral on the scale of a paperweight is only a toy, and a picture of St. Peter's Square cannot convey the idea of magnificently ordered space.

Material as such, whether marble, sandstone, brick, or alabaster, has connotations for the human mind and therefore is a vital factor determining style. The same is true of color. The choice of a material, a color, or some form, indicates a liking for them and for what they connote for the human mind. If the façades on the Piazza S. Marco were of sandstone, the expressive value of the Piazza would be entirely changed.

Habit is also a factor bearing on style and appreciation. In the North a Gothic church may seem the natural form of a church. The Byzantine or Italian church may seem strange to a Northerner but not to an Italian. A modernistic functional church[7] may dismay an innocent worshipper because this type of building used to serve first for commercial purposes. Gothic form was for a long time applied to churches just as epic poems used to be written in hexameters. The general outline of the Doric temple was identified to such a degree with its reverential use that it became a parliament in Vienna, a library in Indianapolis, a museum in Washington, and even a church in Paris; but in all of these instances it is still a temple of legislation, wisdom, art, religion, in short, a reverential structure.

Style is a principle of morphic order, decorative in its effects as a result of the orderliness or regularity. It was, therefore, fittingly enough first conferred on the dwellings of deity. Style as such is therefore a clear indication of the importance of the building. Its order readily assumes the connotation of sacredness, a fixed, immutable character of a ritual. Structures embodying style generally have intellectual and emotive importance. Their scope obviously goes beyond utility, whether they are designed to shelter treasures or images of deity and kings. As a rule, the thing of beauty houses the

[7] Note the Catholic Church of St. Anthony in Basle.

thing of value and assumes therefore a form that is of value in itself. Thus a stylistic structure is a reverential structure. The reverential awe may be associated with the deity, an anointed ruler, the community, or even earthly love and amusement. It is, however, difficult to express all such emotive and intellectual contents by structural means. These are limited in scope since they can be only circular or angular, horizontal or perpendicular, in form or some blend of these configurations. Such basic shapes must have some initial expressive power, since otherwise their lines would convey no comprehensible association or meaning; just as the word "sword" must have some meaning if we are to understand the simile "sharp as a sword". The language of architecture would remain dead and incomprehensible if shapes had no initial pre-artistic emotive and intellectual value. Regularity may explain the principle of the morphic law, but its particular shapes are molded by the invisible hand of unconscious or subconscious intellectual factors that make us feel the meaning of the pattern. Stylistic shapes are evolved spontaneously, certainly not consciously. The other ingredients of style such as color or material or size or proportions, the amount of light, and the like, help to determine the meaning of the shapes and make in the aggregate for the comprehensibility of the creation. Secondary, eclectic shapes are, of course, a fruit of historic knowledge; but emotive factors may determine the choice, as in the instance when one adopts an archaic sort of script because one likes the past.

The system of regularity is the intellectual basis of the building. Without this order no system of expression could arise. But regularity as such already has a positive expressive or emotive value in itself. To this must be added the inevitable quality of the regularity that lends the expressive and emotive color to this basic expressive value. This quality is the particular pattern of shape couched in a particular material, illumined by a certain amount of light and possessing a significant size.

Within the framework of the morphic language, shapes and sizes do not possess the conventional meaning of adopted signs but rather the character of emotionally determined and intuitively grasped natural signs or symbols. Being unconsciously determined and non-

conceptual, they possess a multiple vague signification without objective precision. But ritual or habit may fix the meaning to some extent. The emotional value of such morphic elements resembles that of sounds of different pitch and color. In order to facilitate the understanding of the language of lines, the artist adds sometimes by way of explanation some pictorial or sculptural commentary to the structure. The combination of structural, linear and shape-elements determines the impression made by the structure and constitutes objectively its style. The latter depends upon the regularity of some accent which is the key to the underlying principle of arrangement. The key is repeated in significant unmistakable correspondences and the repetition creates the style. The specific style will consist in the predominance of a given shape, a kind of circularity or the like. The basic shape will in its tendency of insistent repetition appear in impressive singleness or ever recurring groupings.

When we talk of hardness, softness, magnificence or nobility of lines or forms, we use the language of their emotive background. This language refers to the qualitative aspect of regularity and may solve the problem why we prefer one style to another, since regularity may operate within the framework of any style or morphic arrangement. General regularity is even inherent in any arrangement that manifests measure of any type, for instance regularity of position. Correspondences are a type of regularity, namely a material regularity through repetition of similar elements. It is the qualitative aspect of regularity that explains the preferences of taste. Angularity and circularity for instance have emotional connotations. These are visual terms which, translated into tactile terms, assume the meaning of softness or sharpness. Then again rotundity is associated with femininity and angularity with masculinity. All this makes for complexity in the reaction to shapes and explains individual or even social likings or dislikes. But a style may be rejected as a matter of satiety or fatigue or on account of asceticism.

We love or reject buildings like living beings, and this would be impossible if shapes and sizes carried no intellectual or emotive connotations. We say that a Doric temple emanates power; due to the general horizontality, there is an air of rest about the structure and

rest suggests power and dignity. As a chest sheltering a statue, this building cannot soar; it rests comparatively low on its broad base. Dignity and serenity animate the Byzantine edifice because of the powerful sweep of circular lines in the arches, domes and the cupola; while the sweetness of light mildly illumines the whole. Roundness is a correlate to smoothness, and the latter is related to serenity which is smoothness of soul.

Our response depends on processes of thought and emotion. Therefore the mere knowledge of the purpose of the building will affect our reaction to it. This knowledge is a part of the conceptual background of the building. If the building is known to be an apartment-house we shall resent the fact that it looks like a fortress, and vice-versa. The structure, it is true, might be nevertheless satisfactory from a purely morphic point of view; but a building is not an abstract shape, and its known purpose will influence our judgment. We should however be aware of the fact that the morphic language of forms is never so specialized as the purposes of the buildings are apt to be. Modern buildings look very much alike, whatever their purpose. The Palazzo Pitti, on the other hand, was originally a royal residence and is today a museum: it is essentially a reverential structure, good for many purposes. Architectural forms arose as molds of the most important structures of the community. Style may today be evolved from office-buildings while the ogival style was first applied to churches and spread later to city halls, private residences, etc.

The structural language is not specific in the sense of verbal signs, but this is not indispensable because like all works of art buildings have a conceptual background that supplies the needed information. This background is most important because everything, even a shape or a line, is what it is only in its own setting. It may exist abstractly only in a manual of geometry. Structures are not abstract, they have purposes and exist in certain times and surroundings. Without knowledge of this background, adequate appreciation is impossible just as the enjoyment of *Romeo and Juliet* would be inconceivable without previous knowledge of love. To understand fully the Lower Church of Assisi we must know something about the virtue of

humility, contrition, etc. This building is perhaps a sort of structural "De Profundis Clamavi", while St. Peter's may reflect a mood of "Gloria in Excelsis Deo".

The articulation of architecture is not exclusively structural. We see additions to the language of regularity in the form of sculpture, mosaics, and murals. Caryatids are partly structural. This is an auxiliary language resembling perhaps a verbal title in a musical piece. Since their rather commentatorial status is purely expressive and never useful, they act like decoration. We should view them as a commentary on the universality or lack of specific determination of architectural speech. The basic, structural language is not abstract; it is, on the contrary, simpler and therefore vaguer. As against the broad symbolism of structure and shape, they are more specific and more prosaic, working as they do with a more familiar vocabulary of corporeal representations.

Style transcends practical function in that it expresses something more general than the specific purpose of the building. It may reflect love of simplicity or its opposite, briefly, an ideal of life. It is beyond reasonable doubt that morphic language has this power. Height is interpreted as a form of ostentation. The Tower of Babel was a challenge to Deity. Building of skyscrapers cannot be reduced to reasons of utility. The modern matter-of-fact style reflects an emotional attitude of this age. But it is not and cannot be purely functional. There is a difference between the fact of functionality and the structural expression of this fact. The latter involves necessarily some stylization, that is, emphasis which will transcend mere matter-of-factness. It is possible to worship in a tent, but the latter is not the structural expression of the Christian faith and its form of worship; and this is the problem of the architect. A man expresses his mind and feelings in whatever activity he is engaged in, spontaneously, and it would be inconceivable that this necessary activity should be lacking in the construction of buildings. Its absence would be as artificial as the most elaborate ornateness and a result of superhuman arrogance. Such a lack of visible expression would in fact be another form of expression.

Stylistic slant is not confined to architecture. Elaborate design shows up in Oriental metric schemes as well as in the work of the

silversmith and in the decorations of Arabic walls. Delicacy of ornateness is visible not only in the Rheims Cathedral but also in other manifestations of French art. Graphologists may discover the character of the writer from the form of his script; we should conceive styles as forms of script of an epoch. The Latin type of the letter m and its Gothic equivalent show essentially all the difference between the Romanesque and the Gothic styles. The artistic value of these types has little bearing on their usefulness as vehicles of easy reading. It matters little within this context whether we deal with alphabets, buildings, or saltcellars. Seeing the Zwinger in Dresden and the Temple in Paestum, we might say that the former looks like a jewel-box and the latter like a sturdy chest; a similar difference obtains between a Rococo boudoir and the Salle de Glaces of Versailles. The decorative articulation of the Zwinger may be deemed superfluous if compared with the simple lines of Paestum, but it might be useful in another sense, namely, as a faithful expression of the mind of the builder. As such it has lasting value. This form of usefulness fulfills the purpose of art which is useless as a matter of utility. A poem is in principle as useless as any architectural style.

The transition from Byzantine to Arabic form goes in the direction of ornateness and parallels a similar transition from the sturdy Romanesque to the ornamental Gothic form which betrays some orientalism of taste. Early Florentine Renaissance is angular and rigid, perhaps even sterner although less ponderous than Doric architecture. As compared with Gothic forms Renaissance exhibits a matter-of-fact revulsion of realists which is also functional in character. But Florentine angularity considerably softens in Venice to circular lines.[8] They evolve, in turn, into the more elliptic sweep of the Baroque and dissolve into the capriciousness of the Rococo. The new circle parallels—on a different level—the course from the rigid Romanesque to the eccentric flamboyant style. The stylistic lines reflect a changing world of ideals; they are the mirror of the general system of valuations.

The diversity of styles cannot be explained exhaustively by the internal evolution of morphic forms and the emotive or conceptual

[8] Note the Libreria Vecchia of Scamozzi. The Venetians were obviously no Puritans, as the aspect of their waterfront shows.

background of buildings. Their purpose varies with the times, Architecture is an adjunct of civilization on a certain level. It presupposes, therefore, some specific technical knowledge. Factories in the modern sense were not needed in Rome. Hagia Sophia is not a treasure chest where the image of deity was enshrined, but a place where multitudes gathered for prayer. The French Gothic builders were better technicians of construction than their Romanesque predecessors. Climate, technical ability, available building-materials will control the bulk, if not the face, of the building, although style and expression have some leeway in terms of structure, decoration, etc.

The evolution of architectural forms and shapes is very slow, and structural forms have also great staying power, like human languages. It is as difficult to devise a new architecture as to invent a new poetry. The outline of a Roman triumphal arch[9] is still discernible in the system of entrances and porches of Notre Dame of Paris. Only through the addition of a superstructure issuing in two towers to a triumphal arch do we get an edifice resembling the Porta Nigra of Treves, which, in turn, roughly suggests the structural outline of a church like the Rheims Cathedral denuded of decorative additions and without its Gothic articulation. We may view the Greek temple in terms of shape as a system of rectangles crowned by a triangular top. It reappears in many Romanesque church façades in France and Italy. But the proportions are generally changed.[10]

The horizontality of structural lines prevailing in classic antiquity still persists in the Islamic world; but the minaret bears witness to the rising tide of perpendicularity which swept the North, changing the basic aspect of the building. It might have been here an outgrowth of stressed triangularity. Horizontality conjoins easily with rotundity, which naturally opposes height or perpendicularity. Church towers may be a reminiscence of military architecture, and a church may be conceived metaphorically as a fortress of faith.

A new style generally absorbs and remolds the elements of its

[9] For instance, that of Septimius Severus in Rome.

[10] San Miniato al Monte near Florence presents a curious variety of façade. Rectangle and triangle are both quaintly doubled. The lower triangle carries the upper rectangle and is therefore stunted, while the upper rectangle is differentiated into rectangular sub-units. All this gives rise to manifold correspondences with a decorative effect. This makes for charming lightness, but the gravity of the Greek archetype is lost.

predecessors. Gothic ceilings absorbed the elements of Romanesque vaults. Circularity and angularity existed in the Greek temple but in separation. Even the Roman Pantheon is an eclectical combination, not a fusion, of such shapes. The ogive, however, is a genuine synthesis of circularity and angularity on a higher or more complex level. The round arches of the Romanesque world were broken by the triangle. When roundness was suffused with angularity, the new line united whatever was inherent in angularity and pointedness as well as in rotundity. The ogive afforded a high potential of new correspondences and subtler means of expression. While its pointedness stressed height and did not lack sharpness, the connotations of rotundity and mellowness were retained. This blending of seemingly contradictory elements is a glory of the Gothic structure and may in a symbolical sense be a better image of world structure than rotundity or angularity alone.

An architect intends to create a tool with a practical function, but also to create an order which is satisfactory and expressive of feelings and thoughts. The form of the structure depends on climate, surroundings, use, engineering knowledge, and the like; but its purely stylistic aspect is not explained thereby, since the structure has a double function, a practical and a spiritual one. A triumphal arch, however, will have only the latter, not the former. As a gate it is superfluous; it is not an entrance, but a metaphorical gate to glory with a shout of pride. A warsong may also have the practical aim of incitement to battle, but its artistic value depends upon the excellence of its expressive form and structure and its practical aim could be realized by different means. This dualism of functions is sometimes obscured in architecture because buildings generally have some practical use. Differences of style cannot be reduced to differences of climate, purpose, and engineering alone; like poems of different ages, they are the offsprings of a different emotive and intellectual atmosphere.

Practical and formal satisfactoriness should not be confused. A lame man is not satisfactory as a walking machine. A gas stove built like a coal stove may displease because it does not fulfill its practical purpose. But we may object to its form even without knowing its purpose because it does not satisfy the requirements of regularity.

The problem whether windows should be round, rectangular, or otherwise, must not be solved in the same way from a practical and esthetical point of view. Rectangular windows may give more light than Gothic windows and yet the latter may look better and be stylistically preferable. Any practical tool exhibits some regularity of shape; a tool is always shaped when it is a good tool. Man-made objects have an element of formal satisfactoriness, but this does not solve the problem; it only confuses it.

Formal satisfactoriness cannot be reduced to practical or to sensual or perceptual satisfactoriness. No physiological reason can really explain why some people like Gothic, others Greek, structures, while some are indifferent to both. It is a question neither of physiology nor of vision nor yet of utility. Some people like Greek and Gothic forms simultaneously. The satisfactoriness of a form cannot depend upon whether it is Greek or Gothic. The form must first of all be a specimen of regularity and satisfy its own law. But this, in turn, does not explain the exclusiveness of taste. The latter is grounded in the qualitative aspect of forms, their emotive and symbolic import, and must be rooted in the whole character of a personality, its mental and perhaps even general physiological background.

The architect tries to devise means of structural expression that are intuitively grasped. He feels the decorative connotations of regularity, he expresses the reverential character of the building in structural terms. This may be done in many ways—in a Greek temple by a colonnade, elsewhere by flanking towers, high pilasters, an entrance, the size or form of windows. In all these instances the structural articulation becomes also a means of expression. The architect resorts to this articulation impelled by the emotive importance of the edifice. He then creates by means of shapes and sizes the symbolic language of the building. It is to this end that he invents, for instance, the devices of artistic height with its symbolic meaning, and adopts the ways of hyperbolism and imagery, recalling the metaphoric technique of poetry.

Prior to the organizational artistic process the thing that was to be a tool of expression, a column for example, was only a practical tool. The human mind, however, swept by its expressive need in this instance, availed itself of the expressive possibilities inherent in a

means of support and subjected the column to internal differentiation bound by regularity. When that happened the column had a dual function, usefulness and expression. This was the spiritual accomplishment of style.

In the second phase the column became even structurally superfluous and retained only its expressive function, namely, as the expression of reverentiality of the building. Its practical usefulness disappeared. Finally it lost even its genuine expressiveness and was degraded by habit to a decorative flourish, a petrified ornament. This is the state of a sign robbed of the emotional elements that are living in full, unadulterated symbols. Jewels added to the human body are the type of such decorative additions; murals, sculptures or mosaics added to a structure are also somewhat similar to columns in the phase of conventionality; they may, however, sometimes have genuine expressiveness.

These stages represent a typical evolution in the history of all arts. A thing is first useful but not expressive in the pre-artistic phase; it becomes useful and expressive in the heroic period of art; it retains its expressive value but loses its practical function in the third phase; and it becomes a mere conventional sign in the end. This is the final stage in the history of any language, including that of art.

The basic principle of architectural creation is geometrical or morphic. Geometry comes as it were to life in architecture. The morphic law exhibits reason. To the human mind reasonableness is in itself a positive quality. Regularity as the expression of reason has therefore a symbolic function and an emotive worth. Since regularity necessarily has in the architectural context other qualitative aspects of symbolic import and emotive value (in the first place, shape), the symbolic import, the expressive function and the emotive worth of architectural style become obvious. The morphic law gives the edifice the animating breath of reason which arranges the brute material of a purpose and which is the equivalent of the life-instinct or the awareness that molds the forms of the organic world but is not present in an edifice.

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DISCUSSION

THE EVENT IN RES AS ONTOLOGICAL UNIT

IN A PREVIOUS article an attempt was made to reconsider the metaphysical approach to the problem of the nature of reality. It was there argued that both the Hegelian and the dualistic points of view of modern scientific philosophies were inadequate descriptions of reality. All attempts to reduce reality to matter in any form or to mind in some form were bound to be inadequate since these approaches tended to overlook important data. In a sense the metaphysical problem has taken the form once again of the question that confronted the pre-Socratics, but, of course, with the discussions of centuries now behind us. What is the ultimate unit of reality? The tendency which originated with Descartes to begin with the "cogito" leads inevitably (as Maritain has pointed out) to the position of absolute Idealism. As a matter of fact, to begin with the epistemological problem in any form will result in the egocentric predicament if rigorously analysed. For from the question "How I Know" we cannot lead to any "what" of knowledge but only to the noema. Again, to begin with an object which comes to be known means to make impossible the transition to the noesis. Kant as well as Locke and Hume illustrate this difficulty. The "something I know not what" as well as the "Ding an sich" both are inevitable consequences of an approach which begins in Locke's case with the psychology of knowing and in Kant's case with the analysis of the conditions for experiencing.

The Cartesian revolution directed the philosophic problem to the analysis of the subject-object relation. The question was "What kind of apparatus in what kind of subject is necessary to discover the nature of the object known?". The development of modern science changed all this. Chemistry and Physics aimed at an analysis of the ultimate constituents of matter. In recent days this type of approach is given a new stimulus. The work of Whitehead on the one hand and that of Husserl

on the other emphasize this new approach. Whitehead, strongly influenced by his own work in mathematics, physics and symbolic logic, again raised the question of the ultimate entity of the cosmos. The outcome of his analyses shaped by relativity theory and field theory in physics is a new type of "organicism". Whitehead begins as a pre-Socratic and ends as a neo-Platonist. Husserl approached the problem from the methodological point of view. His phenomenological method offers a way of describing entities as they are given. With this approach, the ontological problem takes a new lease on life. What is the ultimate metaphysical unit out of which the cosmos is derivable? What are its characteristics, its quale? The Kantian analysis had attempted to decry these questions as unanswerable. The reaction of German Idealism had refused to accept Kant's limitations to knowledge. But their solution ended in an identification of reality with the Absolute, a conception so static it makes the world of appearance an impossibility.

In approaching the problem anew, the centuries of discussion come to our aid. Husserl's method suggests a consideration of the cosmos without metaphysical bias. A glance, however casual, shows that Heraclitus was absolutely correct in emphasizing the constant flux of things. What has changed is the term; the world, we say, is a dynamic process. The basic entity must then be of that nature, something which happens, a taking-place. The term we shall use is ***event.***

The event is the basic entity for the construction of any metaphysical system. The purpose of this paper is the description of the event. It is presupposed, of course, that this is possible. Also it is assumed, that the event is given as event, *i.e.*, we can ***know*** the event. The demonstration of both these assumptions lies in the development of the system of dialectical evolutionary rationalism. The event as the basic entity cannot be conceived as an "effect" but as a "cause" only. The term cause is used in the sense of logical presupposition. The event is its own cause. It cannot be derived from something prior to itself which is not also event. Events can be the effects only of other events. They cannot, therefore, be analysed into separate parts, but aspects may be distinguished.

The cosmos, which is constituted of events, may be differentiated into two realms. These realms are the realm of ***res*** and the realm of ***mens***. The relation of ***res*** and ***mens*** to the cosmos is like that of space and time to a four-dimensional continuum. The continuum, also called "The Space", is defined by variables (x, y, z, t). X, y, and z are called "space" coordinates, and t is called the "time" coordinate. Any specific set of variables (x_i y_i z_i t_i) defines a point-event in The Space. The parentheses bind the x_i y_i z_i and t_i into a definite point defined by the specific values of x, y, z, and t.

In addition to the realms of the cosmos there is also the factor we shall call "categories". Thus the cosmos is composed of the three coordinate "axes" ***res, mens*** and ***category***. A specificity in ***res*** we shall call an occurrence; a specificity in ***mens*** we shall call an experience. The cosmos then is defined by (r, m, c). The parentheses indicate a binding of the variables into what we call the event. A specification of r, m, and c, will give a definite event (r_1 m_1 c_1). R_1 is commonly called an occurrence and to it we attribute the adjective ***existence***. Under certain conditions r_1 may be analysed into (x_1 y_1 z_1 t_1); *i.e.*, a point-event is a special type of occurrent. In so far as it does not include m_1, it is not an event; m_1 is commonly called an experience, and to it we attribute the adjective subsistence. C_1 is discoverable insisting both in r_1 and m_1. It is a kind of parameter which helps define the r_1 and m_1. Its specification depends upon the specificity of r_1 and m_1. C_1 is not r_1 nor m_1 yet helps define both. (It is not possible here to speak of a mental event or a material event or a categorial event. *Res, mens* and *category* are not events. But events possess coordinate *res, mens,* and *category*.) The m coordinate or subsistent aspect of events involves, for example, the rational element of the event. It may be illustrated by the "principle of sufficient reason", or "the law of contradiction" or "the principle of causality". It may in some events involve more, as, for example, emotion or willing. In so far as it is a mere m_1 apart from an r_1, we have no event. The cosmos is not composed of rational principles alone. For the point-event (x_1 y_1 z_1 t_1) to become an event in our sense, the additional coordinates o_1 and c_1 must be introduced. Thus we have

$$\frac{x_1\ y_1\ z_1\ t_1}{r_1} \qquad \frac{\qquad}{m_1\ c_1}$$

as the complete physical event. O_1 may be interpreted as the "observer" and c_1 as the categories of the particular system of physics in which we are. The position of the o_1 in Physics has only recently been recognized.[1]

The c_1 are the hypostatized forms of what we usually call *categories*. We shall use the term *categories* in this paper to refer to these entities rather than to the mental constructs. As such the categories c ***insist*** both in r and m. For example the categories of space and time insist in occurrences, *i.e.*, an occurrence necessitates for its description a specification of space and time. The occurrence therefore is not in space and time at all. Space and time are categories insisting in the occurrence. Other occurrences, *e.g.*, the passage of the sun over a given meridian, may serve as a specification of time. There is a type of circularity in the

[1] For a discussion of the role of the observer in Physics, see L. O. Kattsoff, "Physics and Reality", *Journal of Philosophy and Phenomenological Research*, November 1944.

specification of space and time, *i.e.*, in localization. The categories are neither mere predicates nor "forms" of the understanding; they are "forms" of the event. Kant's proof of the transcendental character of the categories overlooks one alternative. The fact that the categories are presupposed in understanding may point to their inseparability from events and not to their inherence in the understanding. The category is one of the dimensions of the event.

There is a distinction between c_i and the r_i and m_i. The categories insist both in r_i and m_i. This insistence is a unique relation which c_i bears to r_i and m_i. A category is said to have a locus in *res* as well as a locus in *mens*. No analogous relation exists between *res* and *mens*. This relation of insistence is not reflexive, nor transitive, nor symmetric. *Res* may show an insistence of a category but it cannot insist on a category. The same thing is true of *mens*. Actually a category insists only in the event; it is said to insist in an experience or occurrence only as we consider the locus of the category in *res* or in *mens*. The category considered from the point of view of its locus in *res* is not at bottom different from its aspect in *mens*, although they are distinguishable. To say the same thing in different words, the existential category (*i.e.*, the category as it insists in occurrences) is not separable from the subsistential category (*i.e.*, the category as it insists in experiences). For example, the category *time* as existential category aids in localization; the same category as subsistential aids in the differentiation between memories of past events, etc. But *time* is a category which insists in events at a certain level of reality. The category is one; its aspects are dual. We can denote the category in *res* as ${}_rC_i$ and that in *mens* as ${}_mC_i$. Thus c_i implies ${}_rc_i$ and c_i implies ${}_mc_i$. These implications cannot be written as inclusions. It is false to say ${}_rc_i < c_i$ or that ${}_rc_i < c_i$. c_i and ${}_rc_i$ do not form classes of categories. They are the category from a special aspect.

If we denote concrescence by the use of parentheses, then the event E may be denoted by $(r\ m\ c)$. The expression $E_i = (r_i\ m_i\ c_i)$ then denotes a variable expression indicating the event i. If i indicates the point-event (p.e.) of Physical theory, the expression would become $E_{pe} = (r_{pe}\ m_{pe}\ c_{pe})$. This is still a variable expression but one of lower order than E_i.

Among the events E, there occurs an E_i capable of intuiting other events E_j. Such an event will be called a "knower" and indicated by E_k. $E_k = (r_k\ m_k\ c_k)$. Among the m_k of E_k we find two types: (1) immediate knowing (= intuiting), (2) mediate knowing. E_k will intuit an E_j in its various aspects $r_j\ m_j\ c_j$. In general r_j is intuited by the sensory organs, m_j and c_j by rational processes. Knowledge of these is called mediate knowledge. In so far as these are of r_j m_j and c_j as if they were separate (since the senses give us only sensory per-

ceptions, etc.) the resultant cannot be viewed as adequate knowledge. For example, to intuit the position of an event is not sufficient. To know the event it must be seen as an *event*. The means of acquiring knowledge of E_j as $(r_j\ m_j\ c_j)$ we have called elsewhere "eidetic intuition". Knowledge is the recognition of an event *qua* event. E_k knows E_j through eidetic intuition, that is, directly. Eidetic intuition gives the event as concrescence. Other forms of intuition make possible the description of r_i or m_i or c_i separately. The concrescence is not the *act* of E_k but is grasped by E_k. In other words reality is not constructed by E_k but is known by E_k.

Given two events E_1 and E_2. Since by hypothesis $E_1 = (r_1\ m_1\ c_1)$ and $E_2 = (r_2\ m_2\ c_2)$ and E_1 is distinct from E_2, it follows that one, at least, of the following relations holds: $r_1 \neq r_2$; $m_1 \neq m_2$; $c_1 \neq c_2$. Events are, therefore, differentiated from each other in one of these aspects, that is, there must be some property of the event E_1 as occurrent or as experient or as category which differs from a corresponding property of E_2. The same occurrence may give rise to different experiences (for instance, because of varying apperceptive backgrounds of E_k); the same experience may result from different occurrences; or the same occurrences and experiences may be imbedded in different categories. Every event is unique. The various relations may be indicated by the following scheme:

	$E_1 \neq E_2$		
1.	$r_1 = r_2$	$m_1 = m_2$	$c_1 \neq c_2$
2.	$r_1 = r_2$	$m_1 \neq m_2$	$c_1 \neq c_2$
3.	$r_1 = r_2$	$m_1 \neq m_2$	$c_1 = c_2$
4.	$r_1 \neq r_2$	$m_1 = m_2$	$c_1 = c_2$
5.	$r_1 \neq r_2$	$m_1 = m_2$	$c_1 \neq c_2$
6.	$r_1 \neq r_2$	$m_1 \neq m_2$	$c_1 = c_2$
7.	$r_1 \neq r_2$	$m_1 \neq m_2$	$c_1 \neq c_2$

If this table is read across, the ways in which two events may differ will result. We list a few illustrations.

1. E_1 = A falling body in the Aristotelian system.
   E_2 = A falling body in Relativity Physics.

2. E_1 = Halley's comet seen by an ignorant mediaeval peasant.
   E_2 = Halley's comet seen by a contemporary astronomer.
3. E_1 = The invasion of Poland in 1939 viewed by the Polish government.
   E_2 = The invasion of Poland in 1939 viewed by the American government.

Other illustrations will suggest themselves to the reader.

From these illustrations, it is clear that every E_i is related to a system of E_j. Also the E_i involves m_i, a fact emphasized in the realm of Physics by quantum mechanics. The apparent atomicity of the event holds only at the molar or gross level. The analysis of the r_i m_i and c_i of an event displays so much overlapping that it is impossible to consider an event as a monad in the Leibnizian sense. As a matter of fact, all attempts to particularize the event so as to isolate it as a separate entity end in failure. E = (r m c) does not represent an "atom" but a "field" spread infinitely. In ordinary experience we usually call the area of greatest intensity the event. Events are continua with critical points. They come to be seen as particular whenever attention is directed to one of these critical points. The attempt for example, to represent the invasion of Poland as an event unique in the history of Europe leads to inevitable misunderstandings. Onesided explanations of events, such as the attempt to explain the rise of Fascism as the result of a struggle between the "haves and have-nots", are further illustrations.

The *res* aspect of one event sooner or later changes to or merges with that of other events. The same thing holds of the *mens* aspect. The event can be individuated, that is, given a specificity. But this specificity occurs within a system of events. Reality is a continuum of events E_1. Each E_2 is specified as a smaller point in that continuum. These events form a well ordered series, that is, of any two events, E_i and E_j, E_i is either the same as E_j or different from it, and E_i precedes, follows or is simultaneous with E_j. Furthermore between any two events E_i and E_j, there is always another event E_k which overlaps E_i and E_j. Reality is not merely a sum total of events and cannot be described as such. It is rather a dynamic ongoing series of these events. The events are not to be viewed as existing *in* reality. Reality is, so to speak, the class of all events. So if $E = (r_i\ m_i\ c_i)$ then $R = [E_i]$. Occurrents, existents and categories are not therefore elements of reality, since they are not events. Reality consists of the class of all concrescences, and since concrescences continue R is "open". Occurrents, existents, and categories are elements of events. Events are the *molar* units of reality. R_i m_i and c_i are the *molecular* units of reality.

Any attempt to isolate an event would involve the construction of artificial boundaries. The influence of the event extends beyond these

and gradually merges with the influence or field of other events. We are led therefore to the extension of the event far beyond its critical point. The critical point is derived by surrounding part of the field by boundaries and then restricting these boundaries. The event as particular is the limit of these successive restrictions. The concrescence which is the event results in a field of influence. The location, for example, of a particle is not a point except as the point is the limit of the successive restrictions on the field of influence of the particle. The location of the particle is the critical point, that is, the area of greatest intensity or maximum effect. Likewise in the case of historical events, for example, Caesar's assassination, the event is viewed as the moment of greatest intensity. The moment is but a limit of successive restrictions upon the total drama.

In so far as the event is particular, it is a restriction of a field in which it is related to other events similar to and connected with itself. This is the universal aspect of the event. The universality of the event (in *res*) is the element of the relatedness of events. It is this which makes possible the evolution of reality. $R = [E_i]$ is then a connected field of connected fields. Each E_i in the field is itself a field and merges into other fields E_i. The openness of R means that a field E_i will merge into other E_j both prior and subsequent to E. In some fields these relations of prior and subsequent are recognized to be temporal priority and temporal futurity. It is perhaps unnecessary today to point out that a class such as R may be open internally. What this means is that from events only events can occur and from events other events continue to evolve. Furthermore it is to be emphasized that the term *class* as used of $R = [E_i]$ does not mean a mere logical construct, that is, an *act* of lumping into a whole separate entities. R as a class is the name for the structured configuration of events. It is itself nothing other than this structural configuration. What is said of R is not said of a new totality but of the events comprising this totality. Since R is not a concrescence of *res*, *mens*, and *category*, that is, $R \neq (r_i m_i c_i)$, $R \neq E$.

R is the continuum of events. A continuum may be viewed as a field of events ordered in a definite way. Each event to be ordered is unique; yet its uniqueness is its order in the field. Any event will divide R into two subclasses of events, those prior to it and those subsequent to it in the same realm. Such a division is not exhaustive, since there are many events neither prior to nor subsequent to any single given event.

The connexity of events is not that of a simple series. As a consequence, the continuity of R is not precisely the same as that of ordinary continuous series. R is a continuum in the sense that space is a continuum. That is to say, if we select any given event E_k, then between it and any

other event E_e there will always be an event E_i. This may be viewed as another form of the principle of causality. The events in the evolution of a particular event E_k do form a series akin to a continuous series in the sense that they satisfy Huntington's postulates in *The Continuum.*

The word *continuum* is used in two senses:

(1) A continuum is a field, defined by the events.

(2) A continuum is a series of E_i arranged in an order of a definite type.

R may be viewed as a continuum in sense (1); the events of R may be arranged to form a continuous series. These two meanings are related, since the possibility of arranging E_i as a continuous series makes possible R as a continuum.

The relation between events, which makes R a continuum, displays itself as the property of an event. The properties of events are ontologically real. One event is related to another by the properties which are common to them. Each property is a complete path in Reality. The intersection of a group of paths gives rise to the particular event. This conception runs counter to the usual point of view. Ordinarily we conceive a property to be the effect of an event. The difficulties of understanding the event apart from its properties involve us in various absurdities such as the thing in itself, that is, the notion of substance as a carrier of properties but itself not having properties. Again, the usual point of view has difficulty in explaining how events evolve or change their properties. If we view the property as a path in Reality the intersection of which determines the particular event, these problems no longer trouble us. There simply is no substance in Reality which carries properties. The properties are the event at that level. Change of properties simply means a variation in the paths that intersect.

Although we distinguished the event in three aspects—*res, mens,* and *category*—our discussion has centered around the event in *res* or as occurrent. The purport of this interpretation is to bring metaphysics into line with recent developments in Physics. It is no longer possible to view matter as "substance" nor to view physical events as substance in motion. The results of modern Physics indicate that physical events are waves with nodal points of intensity. These waves spread out in space and time. In similar fashion, the ultimate ontological entity must be viewed as a dynamic wave spreading out from a nodal point. It should be clear that the r_i of E_i, either as particular or as universal, cannot be the complete r_i. The r_i as continuum implies and is implied by the r_i as particular. But only the coalescence of these gives us the real r_i. This coalescence we shall call the essentiality of the event or the eidos. The eidos as an occurrent is the r_i both as particular and as universal. There

will also be an eidos-m_1 and eidos-c_1. The eidos-E_1 is [eidos-r_1, eidos-m_1, eidos-c_1]. The eidos-E_1 is what maintains the event E_1, *qua* E_1, throughout evolution through the categorical schema. The eidos-r_1 is the *per se* aspect of the event as occurrent. The eidos-r_1 is to the r_1 as the invariants of a mathematical equation are to the equation. Under transformation of a definite type an equation will retain certain basic relations as invariant. So under transformations (*e.g.*, growth, change, etc.) the eidos-r_1 is maintained although the r_1 may vary. Likewise, as the invariants *define* in a definite sense the equation so the eidos-r_1 defines the occurrent. The eidos is a pure actual-immutable, eternal and real. Here lies the province of philosophy: to establish protocols about the eidos.

The above remarks are clearly preliminary. Only one aspect of the event is considered, the *res* aspect. Many problems concerning the *mens* aspect remain to be solved. But a great deal of what has been said about the occurrent holds, *mutatis mutandis,* of the experient aspect of the event. The categorical aspect needs special treatment. Especially must we delineate the various categorical realms in the evolutionary schema. The dynamic picture of reality afforded by this analysis seems to give promise of a more adequate integration of metaphysical speculation, a more adequate solution of the epistemological problem, and a more adequate means for the prediction of events.

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ART AND SCIENCE INSEPARABLE

MR. SIDNEY ZINK[1] has agreed with Mr. Ransom's contention[2] that art needs more separating from science than I would grant. Mr. Zink is right that the commonsense practice of mankind, in distinguishing between art and science, is evidence that they are two different things. At the same time he admits that between certain phases of the two things are genuine similarities. Taken as objects and as activities art and science may be lumped together in his view, but not when considered as experiences. One must wonder how an experience of art or science can be isolated from what is experienced as an object or activity. Mr. Zink means by object "the material content of the experience or activity"; by activity "the human treatment of this object over a period of time". This is natural enough. But experience is for him "the immediate presence of the object to attention" (366). If this means that the material content of the object is being attended to, and that the human treatment of the object, becoming involved in the object, also is focused on, then those aspects of art and science which are admittedly similar are the content of the experience, whether of art or science. To find nevertheless a decisive dissimilarity between art and science, in the awareness of them, it is necessary for Mr. Zink to specify and stress that the crucial consciousness of them is immediate. The effect of calling this experience immediate is simply to withdraw it from what is experienced, from anything which can be analysed in either art or science, and from the responsibility of analysis.

Doubtless Mr. Zink did not intend to shirk such responsibility. But his careful reasoning got off on the wrong foot in choosing immediate experience as the basis for comparing art and science. This footing may seem proper for a discussion of art, because it is traditional in aesthetic theory to approach art from the standpoint of the spectator who does nothing about it but come close enough and stay long enough to see and take in. Such assimilation has seemed to be appropriate and adequate

[1] *The Journal of Philosophy* XLI (1944) 365-375.
[2] *The Kenyon Review,* Winter 1944.

though largely passive, private, non-committal, occurring normally in a museum (library or theater) aloof from the "appreciator's" practical activities and their consequences. To some extent science can be approached in the same way. Its records and apparatus can be exhibited and contemplated for what they offer on the spot. But it would never be denied that they were devised for purposes ulterior to contemplation. Museum pieces are often eloquent of use in kitchen, church, or war, but association with glass, frame, and pedestal refines away such associations and reduces them to non-aesthetic status.

The attitude of owner and donor (if not of dealer) is assumed to have been that of the artist, as if what his work is to them it was to him and *vice versa,* except for the price which was not his. The irrelevance of price but for factors foreign to genuine appreciation is seized upon to confirm the detachment of art and at least the semi-detachment of its keeper, as if art's only contact with the vulgar world were the apparently fortuitous one of coming under the auctioneer's hammer. If it is aesthetically accidental that art acquires commercial value, however, it is not psychologically accidental that a man who has acquired enough money to afford "priceless" things (whether pictures, books, records, buildings, furniture, or what not) should not only have but give them, pay to stop payment on them, install them outside the market in a realm of free contemplation, and so buy his own freedom to abide there in memory. The effect is that art (of any kind which can be hoarded) and its appreciators are physically and imaginatively removed from the reality of action and suffering where business is carried on, where science operates, and where art is produced.

The effect has further been to distract aesthetics from the artist, letting it rest upon the residue of his labor which can be sucked into a contemplator's "immediate" experience. What cannot be absorbed here is then regarded as not properly belonging to art or not to the aesthetic part of it. Thus any instrumental character of art is deemed aesthetically unassimilable. By the same token something held to be different from art, such as science, may be assigned an aesthetic aspect so far as it can be enjoyed as if it pertained to art; that is, enjoyed immediately and as if stolen from the world.

One could say (as I did) that art is more completely and finally possessed in immediate experience than science is; that science arches out of the moment more purposefully than art does; though art has instrumental value and science has intrinsic value. I now think that even in making such a qualified distinction I gave Messrs. Ransom and Zink more comfort than I needed to. For this distinction depends upon willingness to compare the activity of the scientist as a producer of

scientific work with the passivity of the art-appreciator, who is not a producer but only a consumer of art and may even be considered a by-product of the artist's activity. If art is envisaged in keeping with the lack of action in the appreciator's response to art, according to the traditional aesthetician's account, it is easy to contrast art-appreciation (which should not be called art-activity) with the performance of the scientist. Then art can be presented as caught in a kind of trance while science is described as quite different: positive, instrumental, rational. True parallelism demands comparison of the artist with the scientist. Then the discussion comes into focus.

The artist's conception of a work now is seen to correspond with a scientific hypothesis; the organization of the artistic medium toward the production of the artwork is like the experimental testing of a hypothesis; and the exhibition of the artist's work is matched by publication of a scientific theory. The use of a theory follows in practical application to change and control nature. The use of an artwork is the same, for all who can use it. A conceivable distinction here would limit works of art to working on human beings while calling scientific a project which works on their environment. Since, however, there is no firm line between human nature and the rest of nature, but rather a constant interaction at every level, so that the environment cannot be modified without affecting the environed organism (physical, psychological, social), there is no qualitative and categorical difference between art and science.

Mr. Zink's discrepance between the immediate experience of art and the mediate experience of science disappears when the artist is brought back. The mediate character of his activity is recognized in the common designation of what he works with as his medium, through no verbal quirk but through simple acknowledgment that the artist is a worker who uses materials, tools and techniques, has purposes, successes and failures, like any human producer.

Under this analysis neither does the "immediate" experience of the art-appreciator hold up. It is seen to be only a more or less faint recapitulation of the artist's "mediate" experience, achieved without tools and with no comparable exertion; except when scholarly equipment and endeavor are necessary to recover what the artist wrought. In that case the aesthetician who separates the "pure" intuition of art from any overt manipulation must consistently say, as Croce does, that the effort of scholarship ceases when the artwork has been brought close to the contemplator, who then must simply feel it with his own sensibility. Thus the art-appreciator is just a Sunday observer. Since the structure before him costs him no toil, yet is supposedly built up within his vision essentially as it was originally created, the aesthetician infers that no labor

ever was involved, or ignores it as extraneous to the aesthetic heart of art, which seems now, hence must have been, wholly immaterial, begun and finished by metaphysical fiat. As if art-appreciation were like remembering Saturday's work on Sunday, but without the heat of it, and as if one could renew through a month of Sundays the pleasure of a job that was no trouble, Mr. Zink's appreciator likes to have his "immediate" experience over and over, "as virtually an identical content". But it must be for lack of something better to do, or from felt incapacity to do it, that a person will continue to stare at what was once stimulating. The artist knows there is something better. He wants to go forward. He does not want to paint the same picture, compose the same symphony, write the same tragedy, again and again. That would be as unlikely as for the scientist to work out or elaborate Newton's gravitational theory repeatedly (though it may be pleasant to think it over now and then).

The appreciator himself cannot get the same pleasure from an art experience too often renewed. Up to a point a complex work will yield fresh value with repetition, but only in early acquaintance is there enough difficulty and surprise to offer the art-consumer anything at all like the art-producer's toil and discovery in the genuine experience of doing-and-undergoing. One might give much money for the chance to read a classic again for the first time.

But while it is a mistake to think about art solely in terms of the appreciator, it is also a distortion to believe that the artist all by himself has the one and only aesthetic experience which then is merely re-enacted indefinitely by another, with dwindling value. Dewey's insight should be remembered, that the full and fitting experience of art embraces artistic production as anticipating and as followed by aesthetic appreciation. A thing made without a sense that it will be used and prized by other people, or a thing somehow enjoyed without awareness of its having been made, including what it meant to make it, may be a work of art. But adequate realization of it as such comes only as making and liking are fused in experience which is fully as cooperative and shared as it is private and ecstatic, just as mediate as immediate, as active as passive.

This is not to say that the artistic-aesthetic experience simply begins with what the artist presciently shapes, and comes to a halt with a recapitulation more or less sensitively completed by the audience. So far as the audience is just led to go over what was done and then is through, except for the after-imagery that keeps on humming until it runs down, the creative drive of the producer's experience is dropped out. One does not feel what the artist felt unless able to feel like doing as

he did. The authenticity of this feeling does not depend upon equalling his achievement but upon wanting to undertake something comparable; for he himself was only wanting to do something of the sort before he succeeded, and he might have failed. "Something comparable" or "of the sort" may mean any enterprise, regardless of the field or medium, which challenges men to exercise skill and ingenuity in doing a job which not only employs their capacities excitingly but the excitement of which consists also in anticipation of relaying delight, release and stimulus, to other people, that they in turn may be helped to go and do likewise.

This is the way scientific discoveries beget new ones in endless and spreading sequence, and not merely of the same kind but of all kinds, including many not thought of as scientific. The Tennessee Valley Authority, harnessing water to generate and distribute electricity, is giving masses of people the benefit of truly creative work which they can appreciate in grateful retrospective fashion; but much more in being freed to improve their farms, barns, kitchens and schools, and in having the opportunity of using power transmitted to them through imagination, work and material, in unimagined ways, to be worked out with tools and products not all invented yet. But the ongoing seminal energy of science and technology is being denied to art on account of the spectator-interpretation of art as essentially "immediate" experience divorced from the making of it and "disinterested" in the working of it outside the charmed circle of "pure" appreciation. So congenial is this view to the fear of life's contemporary problems that one is prone to escape here even after realizing how this hiding place is exposed. Doing something about the state of the world offers more hope than immersion in immediacy.

And art in the large and long sense is up and doing, "concerned with production, with generation", as Mr. Dewey has said in showing that it was the identification of science with art in this sense "which put science upon the road of steady advance and ever increasing fertility. . . ."[3] It is worth noting, in this connection, how André Gide awoke from the art-for-aesthetes school to the creative attitude (natural to artist as well as scientist), so that he could write at the end of his *Nourritures Terrestres:* ". . . throw away my book. Emancipate yourself from it. Leave me . . . When have I said that I wanted you to be like me? . . . throw away my book; do not be satisfied with it. . . . Throw away my book; tell yourself that it is *only one* of a thousand postures possible in facing life. Seek your own. . . ."

This is plainly saying that the experience of art should be transitive

[3] *The Journal of Philosophy* XLI (1944) 282.

and not shortcircuiting. It is the serious point of William James' humorous advice that after a concert one should not only feel like doing something but be quick to do it, if only to give one's seat to an old lady in the horse-car. What is done when one gets home to one's own devices will depend upon training and ambition. If music moves a novelist it will urge him on to finish his novel or begin another, while a moving novel will send a composer back to his themes. There is the idea of a novelist's novelist or poet's poet, as an artist to whom men of his own craft return for technique and inspiration. Evidence of appreciation is most impressive in discipleship, and the true disciple does not just follow the master, much less stay spellbound in the immediacy of something he left, but strikes out afresh after being renewed by the great example. If the experience of art is centered in what the artist does, and is seen to flash out of the deepest appreciation in what is done next, the situation is altogether comparable to that of science. There the real deeds, however fascinating to the backward glance, are but point-events, each sparking off others along the forking fuse of progress. But progress is denied by the devotee of immediacy, in which art burns with a flame that ignites nothing. Of course whatever the Egyptians or Greeks or Italians made cannot be changed and still be as it was, and it was perfect, perfectly what it was, perfectly wonderful. So is a saint's bone to the worshipper. To be more significant than a relic a manmade thing must be appreciated for its sensuous, formal and social qualities, none of which can be fully grasped and most of which can scarcely be apprehended apart from some notion of the community which made the maker and the matrix of his work. Background is readily admitted to be relevant to science, but not to art as long as the otiose observer is taken as the norm. He must consider the social setting, however interesting, logically remote from his private delight in the experience of something which seems to be wholly present as he lets it shut out its own origin and everything else. The mistake in such a position comes down to neglecting the artist and consequently distorting the nature of art as if, in contrast to science and all the world's work, the aesthetic experience had no conditions and no eventualities.

In the early and primitive human stages art and science were not differentiated. The Pueblo Indian to this day, in composing and reciting poetry, means to change and control both man and his world. When he sings, "The butterflies are in the corn", he is busy fertilizing the corn, the earth, and his own spirit, all at once, purposively, willing to make and take the consequences. The functions of art and science were not divided until science developed to the point of enabling men to distinguish between nature and human nature. When thought of as subject to

abstract laws, nature seemed more than previously amenable to tools, techniques and theories of control; whereas human nature, so far as regarded in keeping with the dualistic terms of religious and metaphysical tradition as belonging to an independent order of spirit, was not to be controlled scientifically. Physical force could overcome the body, but the human will at its best could not be bent so crudely. It was not to be coerced but persuaded, through reason or emotion, by argument or art. Whether art could appeal to reason as well as to emotion, and whether more properly to one alone or to both together, has been mooted under the banners of classicism, romanticism and their descendants. But as social science and techniques gain respect, as the line between social and natural science disappears, so does the distinction between art and science become untenable.

Still there is no harm in separating art and science according to the recent habit of mankind, so long as the difference is known to be merely occupational, as when Jones is called an artist, Brown a bricklayer, and Smith a chemist. Harm comes when the attempt is made to put art on a metaphysical level, to deny art's honest basis in human toil and aspiration. Then art is cut off from morality and responsibility; the role of art is deleted from the complex drama of human progress. This injustice to the artist is not made good by exalting his work beyond good and evil and flattering him with a "faculty" originating outside the solar system.

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REVIEWS OF BOOKS

THE RIDDLE OF THE EARLY ACADEMY. By Harold Cherniss. Berkeley and Los Angeles, The University of California Press, 1945. Pp. 104.

This little book consists of three lectures delivered at the University of California in April, 1942. The riddle of which they treat arises from the fact that Aristotle frequently ascribes to Plato a version of the theory of ideas not found in the dialogues, characterized by the following doctrines: the assertion of mathematical objects separate from both the ideas and sensible things and intermediate between them; the identification of the ideas with non-mathematical numbers; and the derivation of these idea-numbers in some manner from two ultimate principles, the one and the dyad of the great-and-small.

It has been supposed, and generally believed, that these doctrines represent a later, more technical development of the ideal theory, never committed to writing by Plato, but communicated only orally in the Academy. Cherniss challenges this orthodox solution of the riddle. He contends that this so-called later theory of ideas (or at least that part of it that identifies ideas and numbers) is not Plato's doctrine at all, but the result of Aristotle's interpretation (or misinterpretation) of Plato's teaching.

Probably many students of Plato will sympathize at once with Cherniss' contention, and hope that it can be successfully sustained. Books XIII and XIV of Aristotle's *Metaphysics* are among the dreariest and least profitable portions of ancient philosophy. They suggest, as Shorey put it, that in the weakness of Plato's old age the noble light of his philosophy went out in a mystical fog of Pythagoreanism. Nevertheless hardly anyone other than Shorey in the past hundred years has consistently refused to accept the hypothesis of an oral doctrine of idea-numbers. Shorey simply refused to accept the testimony of Aristotle. "If Aristotle's testimony be accepted there is an end of controversy." But "we need not accept the testimony of Aristotle, who often misunderstood Plato, and was himself not clear as to the relation of mathematical

and other ideas" (*Unity of Plato's Thought*, 82-83). Most persons have felt that more precise justification than this is necessary if we are to reject Aristotle's statements on this matter. It is this more precise justification for rejecting Aristotle's testimony that Cherniss' book presumably will supply. In two earlier works—*Aristotle's Criticism of Presocratic Philosophy* (1935) and *Aristotle's Criticism of Plato and the Academy*, Vol. I (1944)—Cherniss has made us familiar with the use Aristotle made of his predecessors' and contemporaries' doctrines, and is peculiarly qualified to weigh the value of his testimony in this particular case. His book is therefore an important one, and its arguments deserve the fullest attention.

Unfortunately the thesis he wishes to maintain is not altogether clear. This reviewer, at least, is left in doubt whether he would reject all the doctrines Aristotle ascribes to Plato that are not to be found in the dialogues, or would admit that some may be genuinely Platonic and reject the rest, notably the identification of ideas with numbers and the derivation of the ideas from the one and the indeterminate dyad. Again Cherniss seems at times to insist (notably in the third lecture) that Plato gave no oral instruction at all on his doctrine of ideas, while elsewhere he seems to maintain only that such oral instruction as existed did not include certain of the doctrines attributed to Plato by Aristotle.

There is no evidence, he contends, that Plato gave regular lectures in the Academy. Only one lecture is referred to by ancient sources, the famous lecture on the good which Aristotle, Speusippus, and other pupils are said to have attended and of which they took notes, later published. Cherniss wittily exposes the tendency of certain well known scholars to expand this evidence and to suppose that Plato gave systematic and regular oral instruction. But Cherniss is equally vulnerable, though for the opposite reason. Aristoxenus (*Harmonics* II, 30) calls this instruction Plato gave on the good an ἀκρόασις, which certainly suggests more than a single lecture. Can we conceive of Aristotle's *Physics*, the Greek title of which is φυσικὴ ἀκρόασις, as being delivered in a single lecture? Simplicius (*In Physica* 453, 28: 454, 20) designates this teaching as οἱ περὶ τἀγαθοῦ λόγοι, and John Philoponus (in *De Anima* 75, 35) uses the expression ἄγραφοι συνουσίαι. It is generally believed (and Cherniss concurs) that Aristotle's account of this "lecture" was published under the title περὶ τἀγαθοῦ. Now Alexander of Aphrodisias, in his commentary on the *Metaphysics*, more than once refers to "the second book" of Aristotle's περὶ τἀγαθοῦ. In the index of Aristotle's writings preserved in Diogenes Laertius the περὶ τἀγαθοῦ is listed as consisting of three books; in the index of Ptolemaeus it appears as five books. All this suggests that the oral instruction Plato gave on this

subject was considerable; and it is certainly difficult to accept Cherniss' contention that the ancient sources refer to a single lecture only.

We are told (14) that there are two and only two specific passages in Aristotle that can be taken as supporting the hypothesis that Plato gave oral instruction on his philosophy. One of them (*De Anima* 404b 8-30), Cherniss contends, refers to Xenocrates and not Plato. In any case it is not clear that Aristotle intends to refer to Plato here, and Cherniss has done well to challenge the generally accepted view. But the other passage (*Physics* 209b 15) mentions certain ἄγραφα δόγματα as evidence of Plato's thought. Cherniss points out that these "unwritten opinions" (1) are not cited as support for the theory of idea-numbers, and (2) are mentioned only to assert their substantial agreement with the *Timaeus* regarding the nature of the receptacle. Nevertheless we have evidence, which Cherniss apparently does not deny, that Plato gave oral instruction, and that these matters taught orally were regarded as sufficiently distinct from the written doctrines (whether in substance or in terminology only we need not decide here) to justify the appellation "unwritten opinions". There are other evidences to the same effect in Aristotle's text. For example, Ross in a note on *Metaphysics* 992a 20-24 calls attention to the imperfects διεμάχετο, ἐκάλει, ἐτίθει, which "indicate that Aristotle is thinking of repeated oral teaching of Plato."

Cherniss contends that Aristotle's own testimony regarding this later form of the ideal theory is not consistent. The material principle, the dyad of the great-and-small, Aristotle identifies both with the receptacle of the *Timaeus,* and with non-being, in a passage which Cherniss contends refers to the *Sophist* (19ff). Now the non-being of the *Sophist* enters into the ideas, being simply the idea of difference; and the *Timaeus* says that the receptacle never enters into the ideas, nor the ideas into it; hence Aristotle cannot be reporting correctly in identifying two such antithetical principles. There are difficulties certainly in the doctrine ascribed to Plato, that the dyad of the great-and-small is the material principle both of the ideas and of sensible things. But whether they should be taken as evidence of Aristotle's inaccuracy is not so certain. That Plato himself identified the great-and-small with non-being is attested by Hermodorus, one of Plato's immediate disciples, as quoted through Dercyllides by Simplicius (*In Physica* 247, 30 to 248, 20). The explanation given by Hermodorus is certainly not unintelligible, and would remove the particular difficulty that arises from Cherniss' reliance upon what Plato says about non-being in the *Sophist.* It is strange that Cherniss takes no account, here or elsewhere, of this important fragment of Hermodorus.

We should be equally cautious in drawing conclusions from the fact

that Aristotle sometimes criticizes the theory of idea-numbers on the assumption that it limits these numbers to ten, and elsewhere complains that the theory makes no statement regarding the number of real entities, but sometimes seems to treat the numbers as unlimited and sometimes as only ten (26). It is not hard to suppose that if Plato taught a theory concerning the derivation of the number series, the numbers of the decad would receive special attention in his exposition; and this might give rise to confusing and contradictory accounts of what Plato had taught. If Aristotle failed to understand this theory, as we know he failed to grasp Plato's conception of "unaddable numbers", his report of it would be sure to contain some confusion. In fact, the confusion that it does contain might well be cited as evidence that the doctrine in question was not Aristotle's reconstruction, but something which he had heard and could not make sense of.

The third inconsistency Cherniss finds in Aristotle's account is the fact that he frequently describes and criticizes the ideas in a way that would be meaningless if the ideas were numbers (27f). For example, he asserts that the ideas differ from the sensibles of which they are the ideas only in that they are eternal while the sensibles are perishable. Cherniss is right, I believe, in insisting that there are passages containing such criticisms that cannot be explained either as deliberately disregarding, for methodological purposes, one aspect of the idea-numbers to criticize another, or as possibly composed before Plato had developed the theory of idea-numbers. But is such inconsistency to be taken as evidence that Aristotle is wrong in reporting Plato's identification of ideas with numbers, or that he has misinterpreted the meaning Plato attaches to "absolute man", "absolute horse"? Surely Cherniss does not really think that Aristotle's description of the ideas as simply "eternal sensibles" is "in accord with the evidence of Plato's writings" (28). He has already shown in his larger work that he regards such statements in Aristotle as a perversion of Plato's theory.

The *Philebus* is usually cited as containing intimations of the alleged later theory. In this dialogue Plato divides all things (ὄντα) into four classes: the unlimited, the limit, the mixture of these two, and the cause of the mixture. The unlimited is described, in one of its aspects, as "greater and smaller", and the essential character of limit is asserted to be number. Since these "classes" are set forth in a dialogue which attempts to determine the nature of the good, it is tempting to identify the first two with the one and the dyad recorded in Aristotle's account of Plato's teaching on the good. But Cherniss objects (18) that according to Aristotle the ideas are derived from the one and the dyad, whereas in the *Philebus* the mixed class consists of the objects and events of

the sense world, while the ideas are called monads and are described as eternally immutable and unmixed (*Philebus* 15ab, 27a, 59c). These objections do not seem insuperable, but to show that they are not would require a lengthy discussion of the text. It must suffice here to point out that (1) *Philebus* 59c does not in fact say that the ideas are unmixed: "pure knowledge is concerned with the things that are eternally the same without change or mixture, or with what is most akin to them;" (2) in 15ab the unity and immutability asserted of the ideas is stated as a problem for examination, not as a fixed dogma; and (3) 25d refers to the class of the limit (which Cherniss would presumably identify with the ideas) as the "offspring of the limit" (ἡ τοῦ πέρατος γέννα).

But let us return to Aristotle's testimony. Cherniss argues that an examination of Aristotle's account of Plato's lecture on the good shows that in it there was no specific identification of ideas and numbers. All extant accounts, it is generally agreed, go back to Alexander of Aphrodisias, who alone seems to have seen Aristotle's work on the subject. Now Alexander says that in Aristotle's account the one and the great-and-small were represented as the principles of numbers and the principles of all entities. But, Cherniss argues, the identification of ideas and numbers is Alexander's own conjecture, based upon Pythagorean doctrine and made necessary, he believes, by the absence of any explicit statement in Aristotle's report (28f). Even granting that this is correct, one cannot be sure what we are to make of it. Are we to accept as reliable Aristotle's account (as given by Alexander) on the points which Cherniss admits were included in Aristotle's report? If so, Cherniss is admitting that Plato taught orally a doctrine including two at least of the three features listed at the beginning of this review—one of them, the derivation of all entities (ὄντα) from the one and the great-and-small, involving what Cherniss regards as a serious conflict with the *Philebus*. To admit so much is to accept the greater part of the hypothesis Cherniss has presumably been attacking, and is inconsistent with much of his previous argument. The alternative is to suppose that Aristotle's report is not correct at any point. But this can hardly be what Cherniss intends, for his argument has established the untrustworthiness of that part of Alexander's account which departs from the presumably reliable report of Aristotle. Besides, Cherniss has nowhere else suggested that we cannot rely on Aristotle's notes of Plato's lecture.

In his second lecture Cherniss endeavors to reconstruct the attitude of Speusippus and Xenocrates toward the Platonic theory of ideas. Speusippus, we know, abandoned the Platonic ideas; but the reason for this, so Cherniss deduces from certain passages in Aristotle and from certain other fragments of Speusippus, was not any difficulty that

he saw in ideal numbers, or in separately existing numbers at all (in fact he asserted the separate existence of mathematical numbers), but the problem of relating separate generic and specific ideas (e.g. the idea "animal" and the idea "man"). In other words, it was the ideas of the dialogues, the ideas that Aristotle calls incompatible with diaeresis, that Speusippus rejected (33ff). Likewise with respect to the theory of Xenocrates, whose habitual procedure seems to have been to try to reconcile the doctrines of Plato and Speusippus, Cherniss adduces evidence to show that the Platonic element in Xenocrates' compromise doctrine was not the idea-numbers, but such ideas as we meet in the dialogues, particularly the being and difference of the *Sophist* (43ff). This portion of Cherniss' book is particularly rewarding, because of the discussion it contains of the theory and practice of diaeresis in the early Academy. But our knowledge of Speusippus and Xenocrates is so fragmentary that obviously no strong argument against the truth of Aristotle's testimony can be provided by the silence of these fragments. Cherniss himself admits that the evidence we have of controversies in the early Academy regarding points of Plato's teaching fails us in the crucial question of the identification of ideas and numbers (32).

Why should Aristotle misrepresent Plato's doctrine? For one thing, Cherniss thinks, Aristotle had a polemical reason for identifying all Platonic ideas with numbers; for this would make it possible for him to refute all three theories (those of Plato, Speusippus, and Xenocrates) by a single systematic proof that number of any kind cannot have separate existence (48). This is a stronger argument than it may seem at first sight; Cherniss gives us here and in his two other books numerous evidences of Aristotle's employment of this polemical device. In the second place, Cherniss believes he can reconstruct the reasoning on which Aristotle based this identification (50ff). Aristotle believed the essence of one is to be a principle of number; he took diaeresis to be a universal ontological scheme in which the more specific ideas are derived from the more general (contrary to Plato's express belief); Plato had said the one is a principle of all ideas; therefore all ideas must be numbers. Underlying and contributing to this interpretation is the fact that Aristotle, like Speusippus and Xenocrates (and many later commentators), failed completely to understand Plato's doctrine of "unaddable numbers". It is now generally agreed that this doctrine is a logical development of the theory of ideas, implicit if not actually explicit in the dialogues, and Cherniss aparently believes that this doctrine can be ascribed to Plato. To start from this basic and generally admitted misunderstanding on Aristotle's part is a very sound pro-

cedure. Whether it would lead eventually to the conclusion that Aristotle was wrong in ascribing to Plato the identification of ideas and numbers, or merely that he misunderstood the significance of this doctrine and misrepresented its implications, is another question. But Cherniss' analysis of Aristotle's thought is, so far as it goes, most instructive, and it goes far enough to establish Aristotle's unreliability as a witness to this part of the alleged Platonic doctrine.

Finally, Cherniss cites the proof Aristotle offers that if the ideas are not numbers they cannot exist at all: Plato's basic principles—the one and the indeterminate dyad—are just the principles and elements of number; now the ideas cannot be either prior to these numbers or posterior to them; therefore the ideas must be identical with numbers, or else be derived from no principles at all (58). Whatever be the validity of Aristotle's argument, Cherniss contends that it is a clear admission that the identification of ideas with numbers is Aristotle's inference. "If your opponent asserts a thesis which you undertake to refute you do not begin by proving that he asserts it" (59). It is to be noted here again that Cherniss' interpretation of Aristotle's reasoning seems to admit, by implication, that the doctrine of the principles (the one and the dyad) and the derivation of the number series from these principles, were features of Plato's oral teaching. For these are the premises of Aristotle's conclusion, and his proof would hardly be convincing unless the premises were regarded as correct statements of his opponent's views.

In his third lecture the author gives us a brilliant and learned account of the controversies in the early Academy. There were controversies regarding the interpretation of the *Timaeus*—on the nature of the receptacle, on Plato's conception of the soul, on the literal vs. the figurative interpretation of the generation of the world. There were differences of opinion regarding the "mathematicals", regarding the extent of ideas, regarding the relation of ideas to particulars, regarding the nature of mind and its relation to ideas. Since many of these disagreements concern the interpretation of identifiable passages in the dialogues, he warns us against the assumption that, when they seem to ascribe to Plato notions that are not verbally expressed in his writings, the source of these notions must have been his oral teaching or discussion (75). This is sound advice. One would hardly adopt such a hypothesis to explain (to take a modern parallel) an apparently non-Bergsonian idea or expression used by one of Bergson's expositors. But Cherniss goes too far when he says that the only legitimate conclusion to be drawn from differences of opinion concerning a point of doctrine is that Plato himself did not teach or discuss the doctrine at all. He takes the differences of opinion about the *Timaeus,* for example, as

clear indication that Plato did not expound any physics or natural philosophy beyond what he wrote in that dialogue, and did not even give his students or associates any further exegesis of the doctrines set forth there (72). "Since Aristotle and his fellows in the Academy hotly debated the comparatively simple question whether or not the creation in the *Timaeus* was meant to be understood literally, it is obvious, first, that they were interested enough in it to ask Plato for his answer, and second, that they either refrained from asking or that he refused to reply" (75). But Cherniss somewhat naively overlooks the probability that Plato was dead when the *De Caelo* and the *Physics* were written. It is true the questions may have arisen earlier; but we may also assume that Plato had discussed the issues at some earlier time and that the memory of his answers had become uncertain. It would be absurd to assume that Bergson taught nothing beyond what is contained in his published writings or gave no further explanation of his published writings, merely because there are differences of opinion now as to the interpretation of his thought. We may add that Cherniss here seems to overlook the "unwritten opinions" cited by Aristotle in the *Physics* with reference to the interpretation of the *Timaeus*. It is therefore not true that for the interpretation of this dialogue Aristotle "had no further resources than has the modern interpreter, the bare text of the published dialogue" (71).

In further support of his curious insistence that Plato taught nothing beyond what is contained in the dialogues, Cherniss points to the absence of an orthodox Academic astronomy, and the absence of anything like Academic orthodoxy in mathematics. We know that both these sciences were cultivated vigorously by the students in the Academy; but apparently each student was free to go his own way without interference from Plato. He makes much also of Plato's remarks in the *Republic* on the difficulty of dialectic and the danger of permitting unqualified persons to engage in it. How many students in the Academy could have met the qualifications set in the *Republic* for the study of this crowning science? He reminds us also of Plato's deeply-rooted conviction that knowledge must develop from within; it cannot be imposed from without. As clinching evidence that acceptance of the doctrine of ideas was not required by Plato, Cherniss recalls that Plato selected Speusippus, who rejected that doctrine, to be his successor as head of the Academy. Thus "all the evidence points unmistakably to the conclusion that the Academy was not a school in which an orthodox metaphysical doctrine was taught, or an association the members of which were expected to subscribe to the theory of ideas" (81).

This is obviously an *ignoratio elenchi*. The evidence does indeed

point to the conclusion stated; but what Cherniss undertook to prove was that Plato taught nothing, other than what is in the dialogues, about his doctrine of ideas. This second proposition is certainly not established by the evidence. On the contrary the evidence, including what Cherniss himself has adduced in this book, definitely contradicts it. Leaving out of account all of Aristotle's teaching save what Cherniss himself has on occasion relied upon we can say that this second proposition is refuted (1) by the "unwritten opinions", the existence of which Cherniss does not deny; and (2) by the evidence Cherniss himself admits of Plato's having given at least one lecture, which contained the doctrine of the one and the indeterminate dyad, and a theory of the derivation of numbers and of all entities from these principles. To this we should add, as a general but decisive consideration, Plato's conviction that the spoken exchange of ideas between teacher and learner is more enlightening than the written word. This is such a characteristic and fundamental Platonic doctrine that any account which shows Plato reversing the relationship, and relying upon the written word to the exclusion of oral discussion, verges on the incredible.

It is hard to believe that Cherniss really wishes to defend the extreme thesis put forth in this third lecture. If he does, he will have to reject practically all of Aristotle's testimony, including his published account of Plato's lecture or lectures on the good. However correct it may be to be sceptical of Aristotle's statements (and Cherniss has done good service in this and in his other books in showing us how unreliable Aristotle frequently is) we can hardly reject them completely. Even that would not suffice in this case, since we would still have to explain away the testimony of Hermodorus and other ancient sources not dependent upon Aristotle. For these reasons it seems we must admit, not only that Plato gave oral instruction on his philosophy, but also that this instruction contained some features not presented in the dialogues. The real question is not whether, but how much of, the unwritten doctrine Aristotle attributes to Plato can be rightly attributed to Plato. Cherniss' doubt about the identification of ideas and numbers seems fully justified. It is to be regretted that he did not focus his attack upon this part of the accepted hypothesis, for such a procedure would, I believe, have brought him nearer the solution of the "riddle".

There is a wealth of material, incidental to the main argument, contained in this compact little volume. As outstanding examples I would cite the discussion of diaeresis (40ff) already mentioned, and the suggestion (78ff) that the *Parmenides* and the *Sophist* reflect the controversy within the Academy over Eudoxus' attempt to explain the relation of ideas to particulars (cf. Aristotle's *Metaphysics*, 991a 14-18).

On these and on many other points Cherniss' learning has helped to iluminate the shadowy background of Plato's later dialogues. It is a pity that so much erudition, ingenuity, and philosophical insight have been devoted to the defense of a thesis which, in its more comprehensive version at least, is scarcely tenable. No doubt if these lectures could have been revised before publication (the author joined the armed forces as a volunteer shortly after they were delivered) their thesis would have been less ambiguous and more solidly established.

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THE IDEA OF NATURE. By R. G. COLLINGWOOD. Oxford, The Clarendon Press, 1945. Pp. viii, 183. $4.00.

In his prefatory note the editor, T. M. Knox, tells us that the work that forms the substance of this book was done by Collingwood from August 1933 to September 1934. The material was condensed into lectures delivered in 1934 and 1937. It was later drastically revised. At the time of his death the author had prepared the first third of it for publication. The remainder is published substantially in the form in which he left it, with only minor editorial corrections on points of detail.

It was to be expected that, in addressing himself to the philosophy of nature, Collingwood's first aim would be to submit the idea of nature to an historical analysis and interpretation, and his second to show that the object of this idea is itself historical in nature and the understanding of it bound up with an understanding of history. This expectation is abundantly verified in the book now published, which thus takes its appropriate place in the ambitious philosophical scheme which Collingwood sketched in his *Autobiography* and of which he lived to complete but a part. It was also to be expected that what he had to say would be enlightening as history, suggestive, provocative and inconclusive as philosophy, and expressed with an incisive clarity rarely achieved in philosophical writing. And here, too, our expectation is not disappointed.

The book is divided into three parts, corresponding to "the three periods of constructive cosmological thinking", Greek Cosmology, the Renaissance View of Nature, and the Modern View of Nature. Each of these views is said to be based on an analogy. Thus, "Greek natural science was based on the analogy between the macrocosm nature and the microcosm man, as man is revealed to himself in his own self-consciousness"; . . . "Renaissance natural science was based on the analogy between nature as God's handiwork and the machines that are the handiwork of man" . . . [and] "the modern view of nature is based

on the analogy between the processes of the natural world as studied by natural scientists and the vicissitudes of human affairs as studied by historians" (9). The main body of the book is devoted to the development and substantiation of this thesis. Under "Greek Cosmology" Collingwood discusses the Ionians, the Pythagoreans (among whom Plato is included) and Aristotle. Here he is at his best. The subject interests him for its own sake and he is thoroughly at home in it. The resulting analysis is a genuine contribution to an historical understanding of the idea of nature.

The treatment of "renaissance" cosmology is less satisfactory. Collingwood here departs from the principle, which he congratulates Whitehead for seeing, that "the great philosophers were all right" and deals shortly and rather shabbily with the major thinkers of this period, from Bruno to Leibniz. His account of materialism is hardly more than a partisan caricature. But he is mainly interested, in this section, in portraying a view of nature as mere "dead" matter, to which the "modern" view can stand in vivid and triumphant contrast. This leads to a considerable oversimplification of the doctrines considered and a curious revaluation of Hegel's *Naturphilosophie*. For Hegel, it is said, marks the transition to the "modern" view of Whitehead, since he held that "all reality must be permeated by process and activity" and "that nature cannot be a mere machine, because it has in it the power to evolve out of itself, by logical necessity, life and mind" (128). This anticipation of the development of modern science was "in many ways startlingly accurate", and Hegel was only prevented from going further by his too faithful acceptance of the physical science of his day (132). When one considers what Hegel meant by "process" and by "logical necessity" and what he actually said about the structure of the physical world and the manner of its "evolution", this characterization seems, to say the least, misleading. It indicates, I think, that Collingwood as the spokesman for a preferred cosmology has here got the better of Collingwood the historian of ideas.

In the "modern" view, for which the previous section has, by contrast, paved the way, "modern science, after an experiment in materialism, has come back into line with the main tradition of European thought, which has always ascribed to nature an essentially derivative or dependent status in the general scheme of things" (155). There are several grounds for this. The "essential finitude and dependency" of the physical world is one of them, though just why the "finitude" of the physical world in the sense in which physical theory accepts it should involve dependence on an agency outside nature is not made clear. A more serious consideration is that physicists now talk much of process,

and process as development means teleology, a *nisus* in the chick toward the form of a hen and in nature generally toward those forms which are the final causes of its evolution. And major emphasis is laid on the fact that in modern science "matter is essentially process or activity or something very much like life", (147) and that in the realm of matter as in those of life and mind "being is at bottom simply acting" (148). It was once assumed that motion was a mere accident of a body. "This new theory of the atom as a moving pattern of electrons changed all that, and assimilated the chemical properties of matter to the moral qualities of a mind or the vital qualities of an organism in making them a function of time" (147). The reader must decide for himself how far he finds such statements as this enlightening. In spite of the newly discerned resemblance between the chemical behavior of matter and the moral behavior of men, i.e., that both take time to happen, there would still appear to be formidable differences between them. Hence the statement that the one is now "assimilated to" the other is likely to prove more misleading than instructive, save to those whose business it is to search for morals in matter and thus to raise hopes that a closer study of recent physics could hardly confirm. But Collingwood is an admirer of those who philosophize "in the grand manner"—"as if they saw things from a mountain top" (158) and it is not to be expected that from such an altitude the discriminations can be made that, in more pedestrian inquiries, would be essential to accurate and responsible inquiry.

The final point that this book makes about the "modern" view of nature is that of its dependence on history. "Modern cosmology could only have arisen from a widespread familiarity with historical studies, and in particular with historical studies of the kind which placed the conception of process, change, development in the center of their picture and recognized it as the fundamental category of historical thought" (10). Since it *could* only thus have arisen, Collingwood does not hesitate to assert that it did thus arise. It was "the historical conception of scientifically knowable change or process" as the historians had first worked it out, that was "applied under the name of evolution, to the natural world" (13). And from that point on every extension of the use of the ideas of process, development and duration is chalked up as a victory for the historical view of the world. It is in history that the truly modern idea of nature has its roots.

And it is to history that it should return. For science depends on the record of past observations and experiments and the interpretation of past theories. Such recording and interpretation are history. "I conclude that natural science as a form of thought exists and always has existed in a context of history, and depends on historical thought for its exist-

ence. From this I venture to infer that no one can understand natural science unless he understands history: and that no one can answer the question what nature is unless he knows what history is" (177).

This takes us back to history, which has been Collingwood's main interest from the start, and so brings the essay to what is, for its author, a happy ending. It is perhaps not remarkable that, in the present highly inconclusive state of cosmological speculations based on a continually developing natural science, a discerning philosopher should thus have found in "the modern idea of nature" pretty much what, on antecedent philosophical grounds, he wanted to discover. Given the same evidence, equal ingenuity, and different preconceptions, another cosmologist could have come as plausibly to other conclusions. But Collingwood's ideas are interesting and suggestive on their own account. For this, and for its instructive account of Greek cosmology, *The Idea of Nature* merits the attention and gratitude of the philosophical reader.

ARTHUR E. MURPHY

Cornell University

DESCRIPTIVE NOTICES

FOREWORD TO PHILOSOPHY. By CHARLES F. SAWHILL VIRTUE. Cynthiana, Kentucky, The Hobson Book Press, 1944. Pp. x, 91.

Eight short chapters make up this essay of 91 pages whose aim is to preserve "the spirit of philosophy—its personal, questioning flavor". Thus it is expected to provide preparation for more detailed study. The essay would be improved if key-words were used less frequently, e.g., value(s) which appears eight times on page 6 and eleven times on page 67.

The author properly invites the attention of the beginner by discussing the nature of "philosophizing", rather than the structure of technical philosophy. In pleased surprise the uninitiated reader not only discovers that to "philosophize" is to live intelligently but that, to a discernible degree, he is actually engaged in such enterprise. Perhaps he will also realize the need to more fully relate the phases of his life to each other and to guiding purposes. He will note the importance of being both realistic and idealistic. He will find a statement of principles preliminary to the development of any integrated viewpoint. He will look in vain, however, for philosophic finality, unless he makes the mistake of identifying brevity and incompleteness with ultimacy.

WILLIAM H. REITHER

The Ohio State University

THE NATURE AND ORIGINS OF SCIENTISM. The Aquinas Lecture, 1944. By JOHN WELLMUTH. Milwaukee, 1944. Pp. 60.

The author defines scientism as the belief that "science and the scientific method afford the only reliable natural means of acquiring such knowledge as may be available about whatever is real". This includes three characteristics: (1) that the sciences cover the entire field of available knowledge at a given time; (2) that the scientific method is the only reliable method of widening our knowledge and of making it more accurate; (3) that philosophy should be made scientific by conforming to the methods and ideals of science, or that it should correlate and unify the findings of the other sciences. The adoption of these beliefs "commits one to the position that no certain [philosophical] conclusions will be reached".

The origins of scientism, according to the author, are to be found, not in Descartes, but in a gradual loss of confidence in the power of reason to attain

metaphysical truth, as represented in certain medieval philosophers. To put the matter crudely, one might say that the philosophers disagreed as to what metaphysical statements were susceptible of demonstration, and what were to be accepted as matters of faith. Thus, for St. Bonaventure, a divine illumination must guide the intellect to truth; for St. Thomas, reason can devise *a posteriori* arguments for God's existence. According to the author, the first view developed, in the 14th century, an epistemology that depreciated our knowledge of sensible things. Two other factors contributed to this growth of scepticism, the practice of dialectical debate, and the cultivation of a "scientific" philosophy at Oxford. These factors are present in the background of William of Ockham who was finally obliged to "hold that God produces in us the intuitions that we have of existing objects, and can therefore produce in us an assent, even when the object does not exist, very like the assent which accompanies intuitive knowledge" (p. 41). If this is a correct account of William of Ockham, it is easy to see how nominalism and scepticism arose.

J. R. CRESSWELL

West Virginia University

THE RELIGIOUS AND PHILOSOPHICAL ASPECTS OF VAN HELMONT'S SCIENCE AND MEDICINE. By WALTER PAGEL. *Supplements to the Bulletin of the History of Medicine,* No. 2. Editor: Henry E. Sigerist. Baltimore, The Johns Hopkins Press, 1944. Pp. ix, 44.

Jan Baptista van Helmont (1577-1644), admirer of Paracelsus and critic of Aristotle and the "Schoolmen", was a Flemish physician and chemist, whose contributions to the field of science are well known. His work as a whole however has generally been misunderstood according to Pagel, for historians and philosophers have evaluated his philosophy and his science separately without regard to the fact that in van Helmont's age there was no sharp line of demarcation between the two. The present study considers van Helmont's scientific work in its proper philosophical and theological frame.

Pagel's discussion falls into two parts, the first dealing with van Helmont's criticism of the pagan philosophy of the "Schoolmen", while the second and more extensive part deals with van Helmont's original work including his methods, religious motives, and his concept of the organization of matter. Pagel concludes with a review of van Helmont's concept of disease (so sound that van Helmont is generally regarded as the founder of modern pathology) and his ingenious anticipation of the concept of Biological Time in which he linked up Time with the specific "life forces of the individual". Time for van Helmont was duration, not motion. It determined the "specific life rhythm and life duration of the individual".

Throughout his life van Helmont was motivated by a desire to discover empirically the active principles in beings which determined their identity. This led to his well known concept of Gas which for him was more than just a form of matter. It was "the material vector of specificity" and enabled matter

to unite with the "divine spark of life". Pagel concludes that "van Helmont's biological bent is due to his religious zeal, and his scientific achievement the fruit of his religious conviction".

PERRY W. GILBERT

Cornell University

THE BABYLONIAN TALMUD IN SELECTION. Edited and translated from the original Hebrew nad Aramaic by LEO AUERBACH. New York, Philosophical Library, 1944. Pp. 286.

Jewish philosophy, law and literature have seldom been presented in the organized systems characteristic of the Greeks and Romans. The Pentateuch is a congeries of folk-lore, history and legal codes, while even a book as specific in its scope as the Song of Songs seems to lack any easily apparent pattern of organization. The Talmud, Israel's second great classic anthology, representing the accumulated comments, disputations and decisions of Jewish sages for a period of over a millenium, is similarly "organized" in associative patterns. In it are to be found law, religious practice, history, science, folk-lore, ethics—in fact, a reflection of every aspect of a living civilization with which men might be concerned. No concept was too lofty, no concern too picayune for Talmudic consideration.

For this reason the Talmud has been likened unto a sea, and in it men have fished and found materials as varied as the contents of the sea. Distorted statements, truncated from their context, have provided much grist for the mills of demagogues for many centuries, and for that reason this vast source-book, whose disorganized layout has made it a confusing jungle to the uninitiated, has attracted considerable attention in these days of the death struggle of idealogies. The condensation of such an encyclopedia of thought and comment, which in the original fills twenty-two folio volumes, into a handbook of 286 pages is an exceedingly taxing task in which the judiciousness of the selection is the key to its value. On the whole this volume shows care in its selections; each group forming a unit that is well representative of Talmudic form and manner of thinking. The style is far from literary, but as such is a true reflection of the original, which has more of the character of unedited stenographic minutes of discussions than of a literary production. More explanatory footnotes would have been desirable, particularly in such a condensed version. It is also questionable as to whether in such a small volume of selections, reproduction of the entire treatise "Aboth" which can be found in any prayer book, was desirable, despite the fact that it contains some of the Talmud's finest ethical statements. The volume, however, on the whole succeeds excellently in conveying a picture of the mood and character of Talmudic literature.

AVRAHAM SOLTES

McGill University

LU HSIANG-SHAN, A TWELFTH CENTURY CHINESE IDEALIST PHILOSOPHER. By SIU-CHI HUANG. New Haven, Conn., American Oriental Society, 1944. Pp. 116.

In the study of Chinese philosophy, as in other fields, valuable contributions are being made these days by Chinese students working in this country, using the now considerable resources of our libraries in Chinese and about China, and applying western critical methods to the re-evaluation of their own national heritage. This work, done under the guidance of Dr. Derk Bodde, at the University of Pennsylvania, is such a contribution. It is a study of the doctrines and influence of one of the lesser known of the Neo-Confucianist philosophers of the Sung dynasty, one who opposed the teachings of Chu Hsi, generally taken as representative of this period in the West.

Lu Hsiang-shan, as he is generally known, though his name properly speaking is Lu Chiu-yüan, denies that the "investigation of things" emphasized by the Chu Hsi school is fundamental and stresses the interpretation of Law as a purely moral criterion for human conduct. "For him, the universe and Mind are one. In his own words: 'The Law fills the universe,' and 'The universe is my Mind, and my Mind is the universe.'" This book, after an introductory chapter of historical background, discusses Lu Hsiang-shan's doctrines of Law, Mind and Nature, his methodology (how one can become good), compares his cosmology with that of Chu Hsi, and finally discusses his influence, particularly on the thinking of the great Ming philosopher, Wang Yang-ming (1472-1529).

GUSSIE ESTHER GASKILL

Cornell University

THE FOLLOWING BOOKS HAVE BEEN RECEIVED:

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General Biology and Philosophy of Organism. By RALPH STAYNER LILLIE. Chicago, Illinois, University of Chicago Press, 1945. Pp. 215.

Studies in Sri Aurobindo's Philosophy. By S. K. MAITRA. Benares, India, Benares Hindu University, 1945. Pp. x, 160.

Parmenides. Some Comments on his Poem. By WILLEM JACOB VERDENIUS. Groningen, Batavia, Bij J. B. Wolters' Uitgevers-Maatschappij NO. V., 1942. Pp. iv, 88.

The Development of Mathematical Logic and of Logical Positivism in Poland between the Two Wars. By Z. JORDAN. (Polish Science and Learning, 6.) New York, Oxford University Press, 1945. Pp. 48.

Fate and Fredom. A Philosophy for Free Americans. By JEROME FRANK. New York, Simon and Schuster, 1945. Pp. viii, 376.

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tione et de praescientia dei et de futuris contingentibus of William Ockham. Edited with a Study on the Mediaeval Problem of a Three-valued Logic. By PHILOTHEUS BOEHNER. St. Bonaventure, N.Y., The Franciscan Institute, St. Bonaventure College, 1945. Pp. xii, 140.

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Productive Thinking. By MAX WERTHEIMER. New York, Harper & Brothers, 1945. Pp. xiv, 224.

The Correspondence of Bayard Taylor and Paul Hamilton Hayne. Edited with an Introduction and Notes by CHARLES DUFFY. Baton Rouge, Louisiana State University Press, 1935. Pp. xii, 111.

The Creative Mind. By HENRI BERGSON. Translated by MABELLE L. ANDISON. New York, Philosophical Library, 1946. Pp. 307.

Nature of Consciousness in Hindu Philosophy. By S. K. SAKSENA. Benares, Nand Kishore & Bros., 1944. Pp. xii, 223.

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Indicaciones sobre el problema de la concepcion del mundo. Por FRANCISCO ROMERO. Separado de *Minerva,* II 5-6, en-abr. 1945.

Language and Myth. By ERNST CASSIRER. Translated by SUSANNE K. LANGER. New York and London, Harper & Brothers Publishers, 1946. Pp. xiv, 103.

The Stars Are Still There. By STEWART EDWARD WHITE. New York, E. P. Dutton & Co., 1946. Pp. 191.

A Grammar of Motives. By KENNETH BURKE. New York, Prentice-Hall, Inc., 1945. Pp. xxiv, 530.

The Basis of Criticism In the Arts. By STEPHEN C. PEPPER. Cambridge, Massachusetts, Harvard University Press, 1945. Pp. xii, 177.

Plato's Theory of Man. An Introduction to the Realistic Philosophy of Culture. By JOHN WILD. Cambridge, Massachusetts, Harvard University Press, 1946. Pp. xii, 320.

On the Nature of Value. The Philosophy of Samuel Alexander. By MILTON R. KONVITZ. New York, Morningside Heights, King's Crown Press, 1946. Pp. viii, 119.

Walt Whitman Handbook. By GAY WILSON ALLEN. Chicago, Packard and Company, 1946. Pp. xviii, 560.

Fifty Years Ago. By MIRIAM THERESA ROONEY. Reprinted from *The New Scholasticism,* Vol. XIX, No. 4, October, 1945. Pp. 353-368.

The Unbinding of Prometheus. By JAMES S. THOMSON. Reprinted from the *University of Toronto Quarterly,* Vol. XV, No. 1, October, 1945.

De la justice. Par CH. PERELMAN. Bruxelles, Office de Publicité, 1945. Pp. 84.

NOTES

THE Library of Congress now possesses an autograph manuscript by Benedetto Croce. It is his article "Estetica", which Croce prepared in February 1928 for the Fourteenth Edition of the *Encyclopaedia Britannica*. The manuscript, bound in illuminated pigskin, covers 49 octavo pages. This notable gift is the result of the combined good offices of several individuals. The autograph manuscript of the "Estetica" had been presented by the author to Commendatore Tammaro De Marinis in March 1928. The generous determination on the part of Commendatore De Marinis, a collector of manuscripts and rare books in Florence, to present the manuscript to the Library of Congress, was accomplished through the good offices of Edgar Erskine Hume, Brigadier General GSC., Senior Civil Affairs Officer, Fifth Army, and of Commander Michael A. Musmanno, of Pittsburgh, a member of the staff of the Allied Military Government, and a close personal friend of Senator Croce. To Commendatore De Marinis, Senator Croce wrote:

> "Permit me to thank you from my heart for the noble definitive destination that you have assigned to my manuscript. Italy, now more than in the past, feels herself joined instinctively to America in the ideal of a world liberty, once lost but now regained."

A general meeting of the American Philosophical Association was held at the University of California at Berkeley December 27-29, 1945, for the reception of The Seventh Series of Carus Lectures by Professor Clarence Irving Lewis on the subject "Analysis of Knowledge".

Officers of the Southwestern Philosophical Conference for 1946 are H. N. Lee, President, A. J. Bahm, Vice-President, L. E. Hahn, Secretary-Treasurer, and Gustav Mueller, I. K. Stephens, and W. B. Mahan, Executive Committee Members.

A new half-yearly theological and philosophical review, *Laval Revue Theologique et Philosophique*, has just appeared in Canada, published by the theological and philosophical faculties of Laval University in Quebec. The review is bi-lingual, publishing articles in both French and Englsh.

The price of subscription is three Canadian dollars for the two half-yearly numbers. Single issues may be obtained for two Canadian dollars. All correspondence should be addressed to:

NOTES

M. A. -M. Parent
Secrétaire, de la faculté de philosophie
Université Laval
Quebec, Canada

Professor William Savery died on Saturday, December 8, 1945. He was born in 1875. He took his A.B. at Brown in 1896, his A.M. at Harvard in 1897, and his Ph.D. also at Harvard in 1899. He was professor of philosophy at Fairmount College at Peoria, Kansas, from 1900 to 1902. He was appointed professor of philosophy at the University of Washington in 1902, and has been chairman of the department of philosophy since that time. He has taught also at various other institutions. He was lecturer in philosophy at the University of California in 1933, visiting professor of philosophy at Columbia in 1935-6, and taught during the summer sessions at Harvard, the University of California, UCLA, Stanford, and Oregon. He was chairman of the Board of Officers and president of the Pacific Division of The American Philosophical Association in 1931.

The following is a list of articles in current philosophical periodicals:

MIND LIV 216: *A. J. Ayer,* The Terminology of Sense-Data; *O. K. Bouwsma,* Des Cartes, Skepticism of the Senses; *J. O. Wisdom,* Criteria for Causal Determination and Functional Relationship; *R. I. Aaron,* A Possible Early Draft of Hobbes' *De Corpore; Morton G. White,* Analysis and Identity: A Rejoinder.

PHILOSOPHY XX 77: The late *H. W. B. Joseph,* Life and Pleasure (II); *J. N. Findlay,* On Mind and Our Knowledge of It; *H. F. Hallett,* The Essential Nature of Knowledge; *Joshua C. Gregory,* On Knowing One Another.

THE JOURNAL OF PHILOSOPHY XLII 24: *John Dewey* and *Arthur F. Bentley,* Postulations; *M. Whitcomb Hess, C. C. Landon, W. Owings Stone, H. A. Overstreet,* A Discussion of Overstreet's "The Word Becomes Flesh"; *Alan A. Cooley,* Note on Value. 25: *Melvin Rader,* Polarity and Progress; *Neal W. Klausner,* The Epistemology of C. A. Strong. 26: *John Dewey,* Ethical Subject-Matter and Language. XLIII 1: *Arnold Isenberg,* The Technical Factor in Art. 2: *Stephen C. Pepper,* The Descriptive Definition; *George Gentry,* Reference and Function.

THE JOURNAL OF SYMBOLIC LOGIC X 3: *J. B. Rosser* and *A. R. Turquette,* Axiom schemes for M-valued propositional calculi; *J. C. C. McKinsey,* On the syntactical construction of systems of modal logic; *W. V. Quine,* On ordered pairs.

ETHICS LVI 1: *Hans J. Morgenthau,* The Evil of Politics and the Ethics of Evil; *H. W. Wright,* Intellect versus Emotion in Political Co-operation; *H. Birnbaum,* The Origin of the Moral Call; *Paul Weiss,* The Universal Ethical Standard; *Arthur E. Murphy,* The Rewards of Learning; *Milton C. Nahm,* The "Common Man" and His Education.

PHILOSOPHY OF SCIENCE XII 4: *William Marias Malisoff,* On the Possible Philosophies of Science; *A. H. Johnson,* Whitehead's Theory of Actual Entities: Defence and Criticism; *Mapheus Smith,* Hypothesis vs. Problem in Scientific Investigation; *Herbert Gaylord Bohnert,* The Semiotic Status of Commands; *Arturo Rosenblueth* and *Norbert Wiener,* The Role of Models in Science.

SCIENCE & SOCIETY IX 4: *Yung-Ying Hsu,* The Government of Yenan: A Study of a Chinese Communist Area; *David Hecht,* Chernyshevsky and American Influence on Russia; *V. J. McGill,* The Mind-Body Problem in the Light of Recent Psychology; *Marie Carroll,* On Bartlett's Psychoanalytic Views.

SOCIAL RESEARCH XII 4: *Carl Mayer,* The Crisis of German Protestantism; *Phillips Bradley,* Industrial Relations and the Curriculum; *Hans Neisser,* Economic Possibilities in the Mountain Regions; *Felix Kaufman,* The Nature of Scientific Method: *Kurt Riezler,* Some Critical Remarks on Man's Science of Man.

THOUGHT XX 79: *Francis S. Campbell,* The Postwar Inflation of Russian Power; *Peter Berger,* National Sovereignty and World Unity; *Leonard Feeney,* London is a Place; *John K. Ryan,* Newman as Poet; *James Collins,* An Approach to Karl Jaspers; *Rudolph Arbesmann,* German Catholic Bishops' Protest; *Edwin Ryan, Oscar Halecki, William J. Schlaerth,* Editorials.

THE THOMIST VIII 4: *William A. Gerhard,* The Intellectual Virtue of Prudence; *Thomas Greenwood,* The Unity of Logic; *John of St. Thomas,* The Gifts of the Holy Ghost (Part III).

SPECULUM XX 4: *Ananda K. Coomaraswamy,* On the Loathly Bride; *Alexander H. Krappe,* Arturus Cosmocrator; *Henry and Renée Kahane,* Akritas and Arcita; *Arthur C. L. Brown,* The Esplumoir and Viviane; *Leslie W. Jones,* The Influence of Cassiodorus on Medieval Culture; *Edwin H. Zeydel,* Were Hrotsvitha's Dramas Performed During Her Lifetime?; *Curt F. Bühler,* Notes on the Campsall Manuscript of Chaucer's *Troilus and Criseyde* now in the Pierpont Morgan Library; *Herbert Weisinger,* The Renaissance Theory of the Reaction against the Middle Ages as a Cause of the Renaissance; *Charles Christopher Mierow,* The 35 Vatican MSS of St. Jerome's *Vita Malchi; George R. Coffman,* The Present State of a Critical Edition of *Piers Plowman.*

PSYCHOLOGICAL REVIEW LII 6: *Muzafer Sherif* and *Hadley Cantril,* The Psychology of "Attitudes"; *J. W. Bridges,* Personality as a Work of Art; *Paul E. Meehl,* An Examination of the Treatment of Stimulus Patterning in Professor Hull's Principles of Behavior; *William W. Martin,* Some Basic Implications of a Concept of Organism for Psychology.

THE AMERICAN JOURNAL OF PSYCHOLOGY LVIII 4: *G. K. Zipf,* Some Psychological Determinants of the Structure of Publications; *K. Sward,* Age and Mental Ability in Superior Men; *H. E. Garrett,* Comparison of Negro and

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White Recruits on the Army Tests given in 1917-1918; *M. H. Jones,* Influence of Menstruation upon Nausea Induced from the Vestibule; *L. Postman* and *C. Zimmerman,* Intensity of Attitude as a Determinant of Decision Time; *W. S. Ray,* Protective Inhibition: A Function of Time-Interval; *B. R. Philip* and *V. R. Fisichelli,* Effect of Speed of Rotation and Complexity of Pattern on the Reversals of Apparent Movement in Lissajou Figures; *T. Koester* and *W. N. Schoenfeld,* Modified Methods of Constant and Single Stimuli in Pitch Discrimination; *W. C. Shipley, F. A. Kenney,* and *M. E. King,* Beta Apparent Movement under Binocular, Monocular and Interocular Stimulation; Notes and Discussions.

JOURNAL OF EXPERIMENTAL PSYCHOLOGY XXXV 6: *N. H. Pronko,* An Exploratory Investigation of Language by Means of Oscillographic and Reaction Time Techniques; *A. Sweetland,* Fluctuation of Sensation of Liminal Visual Stimuli; *J. G. Beebe-Center, L. C. Mead, K. S. Wagoner,* and *A. C. Hoffman,* Visual Acuity and Distance of Observation; *H. J. Eysenck* and *W. D. Furneaux,* Primary and Secondary Suggestibility: An Experimental and Statistical Study; *B. Reynolds,* A Repetition of the Blodgett Experiment on "Latent Learning"; *C. Leuba* and *C. Lucas,* The Effects of Attitudes on Description of Pictures.

PSYCHOLOGICAL BULLETIN XLII 10: *Donald G. Marquis,* Notice, Business Meeting, American Psychological Association, Columbus, Ohio, Dec. 27-29, 1945; *John E. Anderson,* Editorial Announcement; *Eldred V. Hardtke,* Aptitude Testing for Metalworking Occupations; *Willard C. Olson,* Proceedings, Fifty-Third Annual Meeting, American Psychological Association, Inc., Evanston, Ill., Sept. 6-8, 1945; *Lillian G. Portenier,* Proceedings, Fall Meeting Rocky Mountain Branch, APA; *Various Authors,* Psychology and the War.

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